DOCUMENT RESUME

ED 213 210 EC 141 161

AUTHOR	Reynolds, Maynard C.; Birch, Jack W.
TITLE	Teaching Exceptional Children in All America's Schools.-Revised Edition.
INSTITUTION	Council for Exceptional Children, Reston, Va.
REPORT NO	ISBN-0-86586-122-6
PUB DATE	82
NOTE	571p.
AVAILABLE FROM	CEC Publication Sales, 1920 Association Dr., Reston, VA 22091 (Publication No. 234, $19.95).
EDRS PRICE	MF02 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Delivery Systems; *Disabilities; *Educational Trends; Emotional Disturbances; Gifted; History; Language Handicaps; Learning Disabilities; Legislation; *Mainstreaming; Mental Retardation; Parent School Relationship; Parent Teacher Cooperation; Physical Disabilities; Psychoeducational Methods; *Special Education; Special Health Problems; Speech Handicaps; Student Evaluation; Textbooks

ABSTRACT

The introductory text focuses on special education in the mainstream with two major themes: (1) the central and joint responsibility of teacher, parent, and principal; and (2) the primary need to limit the occurrence and magnitude of educational problems in handicapped children. The book's approach includes emphasizing processes that blend special and regular education, highlighting the teamwork concept, relating assessment directly to program planning, using findings from research studies or operating programs to support significant points, contrasting prevaling versus preferred practices, noting educational and financial cost/benefit information, and maintaining an international perspective through comprehensive information on both Canada and the United States plus illustrative references from other countries. Individual chapters have the following titles: "Psychoeducational and Historical Foundations;" "Socio-Legal and Organizational Foundations;" "Assessment:" "Parent-Teacher Instructional Planning;" "Slowed Cognitive Development;" "Advanced Cognitive Development;" "Learning Disabilities;" "Emotional Disturbance;" "Physical and Health Impairments;" "Speech and Language Impairments;" "Hearing Impairments;" "Visual Impairments;" and "Severe/Profound Impairments." (DB)

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Maynard C. Reynolds
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TEACHING EXCEPTIONAL CHILDREN IN ALL AMERICA'S SCHOOLS

Revised Edition

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EXCEPTIONAL CHILDREN
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First printing, 1977
Second printing, 1979
Revised edition, 1982

Library of Congress Catalog Number 81-70531

ISBN 0-86586-122-6

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Jack W. Birch is Professor of Special Education and Professor of Educational and Developmental Psychology in the School of Education at the University of Pittsburgh. He began his career as a teacher of exceptional children in 1937 and has since been a supervisor, a school psychologist, a public school and university administrator, and a college teacher. He was Director of Special Education and of the Psychoeducational Clinic in the Pittsburgh Public Schools from 1948 to 1958, before becoming a professor, a department chairman, and associate dean at the University of Pittsburgh School of Education. Dr. Birch is a fellow of the American Psychological Association and the American Association on Mental Deficiency, and a Diplomate of the American Psychological Association. He was also President of The Council for Exceptional Children during 1960–1961 and is now President-Elect of the Foundation for Exceptional Children. He is responsible for over 200 publications dealing with the education and rehabilitation of exceptional children and adults. He was a founding member and a board member of The Association for the Gifted (TAG) and is currently President of the Board of the Western Pennsylvania School for the Deaf. Some special honors include an Award of Merit (1955) by a Pittsburgh parents' association in recognition of outstanding service to the mentally retarded, and a similar award in 1976 from the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, of which he is now a national board member.

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PREFACE

All educators, public and private, moved into a new set of relationships during the 1970's. We prefer *renegotiation* as a term to describe that change process. For us, it means dealings between equals—adaptations taken consciously and voluntarily. The purpose was to achieve a new "fit" between pupils and the schools and among professionals of different backgrounds based on careful reassessment of what each had to offer the other.

Renegotiation was made urgent by parent advocacy, by forward-thinking educators, and by the adjudications and legislation that reaffirmed the right to education for exceptional children in least restrictive environments according to individualized plans. For many more handicapped and gifted children, special education and services were brought into the regular class by the end of the 1970's. Special and regular education teachers and administrators found themselves working together in the mainstream of the school to respond to a newly broadened public policy that emphasized inclusion rather than separation in the education of exceptional students.

The Extended Role of Special Education

Mainstreaming did not make special education redundant. Rather, it forced recognition of the special educator's widened role. It called for added preparation to be an advocate and a consultant for all teachers and to be a helper for all children with any kind of exceptional condition that might generate social, personal, or academic problems. Mainstreaming also called attention to the need to understand and increase the skills of all teachers and administrators to a safe level so that they might accommodate exceptional children in neighborhood schools.

Different skills are needed when most exceptional children are to be served in the regular class and when regular educators are the persons providing an important share of the day to day instruction, services, and management. Thus, this book is oriented toward special education in the mainstream—toward special education as an inclusive resource for all teachers and administrators in all schools.

The Approach Taken in This Book

To some readers of the first edition (1977) this book seemed like a radical departure from existing texts, and it may have been. But it is clear now that it was among the first of a stream of books whose content and format reflect the changing structures now evident in the way schools are providing education for students with unusual needs. It seems plain now that mainstreaming is, itself, not a matter for debate. Instead, what should engage the serious attention of educators and related professionals is how best to implement it for the optimum benefit of all concerned. To that end, this book includes a number of significant features. This revised edition:

1. Gives the reader a solid foundation in current and emerging processes that blend special and regular education. To do so, it explains and illustrates all forms of mainstreaming, from preschool through postsecondary education, for all recognized forms of exceptionality.
2. Presents chapters in a rational sequence, *from the reader's perspective.* For example, giftedness and talents or mental retardation can be associated with every other exceptional condition; therefore these chapters precede others.
3. Highlights the teamwork concept within the personnel structure of the school and among home, school, and community agencies.
4. Emphasizes the "why" and "how" of educational matters, in addition to the "what." Theory is presented, but utility is the chief criterion for determining the background material included.
5. Presents special education as "a part of" rather than "apart from" all the rest of education, including *initial* and *progressive* inclusion of exceptional children with all other children before and during schooling.
6. Relates assessment directly to educational program and services planning. Assessment is taken up early. Assessment procedures unique to specific situations are then dealt with in appropriate chapters.
7. Draws on real life examples from teachers, principals, and parents in every chapter.
8. Uses findings from well designed studies or actual, operating programs to highlight or support significant points.
9. Treats differing points of view in an evenhanded way if the evidence on which they rest is inconclusive or equivocal.
10. Shows the reader what is and what ought to be by contrasting, in each chapter, *prevailing* versus *preferred* practices.
11. Summarizes key historical developments in United States special education and shows interrelationships with the rest of educational history.
12. Takes the reader beyond the laws and court decisions of the past into

procedures that promise to become more widespread whether or not laws are reenacted and court decisions upheld.

13. Calls attention to both educational and financial cost/benefit information, when available, about various forms of special education.
14. Demonstrates rational, professional advocacy, with the locus of control within the profession.
15. Presents concepts of incidence and prevalence in educationally relevant ways rather than in a public health demographic format.
16. Introduces an international perspective by including information from both Canada and the United States, plus illustrative references from other countries.

Organization of the Book

The classifications of children in special education are awkward at best and are mostly of limited help for instructional purposes. The same is true of territorial classifications like "resource room" and "special class placement." Such terms indicate *where* a child or teacher is, but they convey no consistent message about *what,* if anything, is actually going on regarding the child's learning or the teacher's teaching.

These classification practices are in a period of major reorganization. As place-oriented and type-oriented boundaries are breached they become less useful as organizers for teacher preparation, for teacher certification, for administrative structures, and for professional standards activities. That means, too, that "child" classifications and "program" categories of the past become questionable as bases for planning the table of contents and chapter sequence for a modern textbook. As yet, however, we see no thoroughly satisfactory way to resolve the problem those facts present to authors. That is why we have temporized by presenting four chapters of conceptual material, then introduced a series of categorical chapters, and ended with a chapter that brings the reader to a focus on the future.

Our Developmental Position

Teacher, parent, and principal form the heart of the team responsible for educating each child. Their primary task is to promote sound development, the kind of development that reduces the likelihood of problems that call for special education.

Sometimes, though, even the most well intentioned early deterrent procedures fail. The teacher, parent, and principal must then turn to remedial and corrective measures. However, planful stimulation of early development is possible and effective in more instances than was once believed. Serious efforts to anticipate special needs and to satisfy them early does reduce the incidence and the degree of educational problems.

These two themes—the central and joint responsibility of teacher, parent, and principal, and the primary and early focus on limiting the occurrence and magnitude of educational problems—recur in various contexts throughout the book.

Confidence in Our Professional Colleagues

We have consciously written "up" to the intentions and expectations of improvement-minded professional teachers and principals and those preparing for such positions. We are painfully aware of difficulties found in the real, everyday world of the schools, and all of the weaknesses and tribulations that exist there. Yet we have also seen at first hand the surge of professional pride and justifiable self-esteem that educators enjoy when they do excellent work with children. Our illustrations are consciously drawn from the experiences of such teachers and principals. We salute them because they show that very high quality education can be a reality.

The authors have had unusual opportunities during the past decade to work with literally hundreds of special and regular teachers and principals in school systems and departments of special education in colleges and universities where change processes are underway. We are grateful for the opportunities afforded through Don Davies, Bill Smith, Malcolm Davis, Edward Moore, Thomas Behrens, and George Hagerty who, as federal officers, were associated with the experimental programs sponsored under the Education Professions Development Act, the National Center for the Improvement of Educational Systems, the Teacher Corps, and the Office of Special Education. Work in the context of these federally supported projects has given us much opportunity to visit and learn about the renegotiations that are most significant for special education in the context of regular education.

The preparation of the first and second editions of this book has involved many people. On the Minnesota side, much appreciation goes to colleagues, including Evelyn Deno, K. Charlie Lakin, Karen Lundholm, Reece Peterson, Robert Prouty, Sylvia Rosen, and Donna Reynolds. Special thanks go to Bonnie Warhol for careful management of all typing and references. On the Pittsburgh side, Jane Birch, William Craig, Dee Duncan, Ray Garris, Frieda Hammermeister, George Maitland, Hannah and Jack Matthews, Mary Moore, June Mullins, Rich Nowell, Ralph Peabody, James Salem, Jan Sansone, George Shames, Godfrey Stevens, Murray Thompson, Margaret Wang, Earl Young, and Naomi Zigmond gave various combinations of professional and personal support and encouragement to the endeavor that were thoroughly appreciated.

Finally, the authors gratefully acknowledge the editorial advice and assistance of June Jordan, Jill Winter, Laura Cleveland, and Evalyn Schoppet, as well as the insights, comments, and suggestions of those who reviewed the second edition manuscript. They include Jack Bardon, Katheryn Bush, Susan Hasazi, Wayne Lance, Ruth Lundgren, Norman Niesen, and James Walker. Much of whatever merit this book has is a result of the thoughtful and diligent way in which these individuals addressed their respective tasks.

Maynard C. Reynolds
Jack W. Birch

SELECTED KEY DATES AND EVENTS

In the Development of U.S. Public Education, 1776-1981

1776	The 13 states unanimously declared their independence and their joint commitment to "life, liberty and the pursuit of happiness."
1779	Thomas Jefferson's School Bill for Virginia; First state school system proposal.
1791	Passage of Tenth Amendment to the United States Constitution reserves education to the states.
1817	First educational program for exceptional children and youth formally established in the United States—American Asylum for the Education and Instruction of the Deaf (now American School for the Deaf), Hartford, Connecticut.
1818	First grants of money paid by the federal government to states.
1821	English high school for boys organized in Boston.
1823	United States' first normal school for teachers privately established in Vermont. Kentucky established the first state school for persons who were deaf.
1826	First nursery school of the nation opened in New Harmony, Indiana. Bowdoin College first in United States to award a degree to a Black person, John Russwurm.
1829	Massachusetts passed first state high school law.
	First residential school for blind pupils in the United States incorporated in Watertown, Massachusetts; initially called the New England Asylum for the Blind, now the Perkins School for the Blind. First state schools for students who were blind established in Boston and New York City.
1839	State supported normal school for teacher training started at Lexington, MA.

1840	Rhode Island passed first state compulsory education law.
1845	First statewide associations of teachers founded in New York and Rhode Island.
1848	Edouard Seguin came from France to describe his educational procedures with mentally retarded pupils and to urge the establishment of schools for mentally retarded children and youth in the United States. Dorothea Dix confronted the Congress with the inhumanity of many programs for the "mentally ill." The Massachusetts legislature enacted a three-year experimental scheme to instruct ten selected children considered mentally retarded, with a total budget of $7,500.00.
1852	Pennsylvania's appropriation to Elwyn Institute in Philadelphia was the first use of public monies to support education for children with handicaps in a private facility. Massachusetts passed the second compulsory school attendance law.
1854	First U.S. federal direct participation in education of handicapped children and youth through founding by act of Congress of Columbia Institution for the Instruction of the Deaf and Dumb, and the Blind. Extended to college level in act signed by Abraham Lincoln in 1864 and designated in 1865 specifically for persons who are deaf. In 1954 became officially known as Gallaudet College.
1855	The United States' first kindergarten established at Watertown, WI.
1857	National Education Association formed, initially called the National Teachers' Association.
1859	Nation's first residential school for persons with mental retardation started in South Boston under the same Massachusetts School for Idiotic and Feeble-Minded Youth. Samuel Gridley Howe, then head of the Perkins School for the Blind, was most influential in enlisting legislative and public support for this new facility. U.S. Congress initiated a perpetual fund to help educate blind persons through the American Printing House for the Blind, located in Lexington, Kentucky.
1867	Congress created a National Department of Education, later to become the United States Office of Education, under the Secretary of Health, Education and Welfare.
1869	First day classes for any exceptional children were begun for deaf pupils in Boston, Massachusetts.

1873 Nation's first permanent public kindergarten initiated by the St. Louis, Missouri, Public schools.

1878 Day classes for mentally retarded pupils proposed by August Schenck of Detroit in a speech before the American Teachers Association.

1891 Teacher training launched at Gallaudet College in education of deaf pupils.

1893 Committee of Ten report promulgated, the initial report of a series on curriculum from the National Education Association.

1895 United States educators with management responsibilities formed the American Association of School Administrators.

1896 First public school day classes for mentally retarded pupils initiated in Providence, Rhode Island.

1898 National Congress of Mothers organized; now called National Congress of Parents and Teachers.

1899 First public school day classes for crippled children and youth started in Chicago, Illinois.

1900 First public school day classes for blind pupils begun in Chicago, Illinois.

Two states, Wisconsin and Michigan, authorized subsidies to expand classes for deaf pupils in local public schools, the first such state financial support for excess educational cost for any exceptional children and youth.

1904 Vineland Training School started summer training sessions for teachers of the retarded.

1905 E. L. Thorndike conceptualized and planned a scale to measure educational achievement

1906 Approximate date medical inspections were introduced in the schools for the detection and prevention of contagious and infectious diseases.

1908 Establishment of first public school day classes for children with lowered vitality.

Speech correction initiated in New York public school.

1909 First White House Conference on Children and Youth.

National Education Association cites the Goddard translation and revision of the Binet-Simon Scale of Intelligence as a useful test with exceptional children and specifically with mentally retarded children.

1910 Nation's first public junior high schools opened in Berkeley, California, and Columbus, Ohio.

1911	Countrywide survey by United States Bureau of Education found 6% of cities reporting special classes for gifted pupils.
1913	Roxbury, Massachusetts, and Cleveland, Ohio, started first classes for partially seeing pupils.
1915	*Laggards in Our Schools* by Leonard P. Ayres was published; it became one of the first special education texts.
	Minnesota initiated state aid of $100 for each child attending a special class and required certification of teachers to instruct in such classes.
1916	Organization of American Federation of Teachers as an affiliate of the American Federation of Labor.
	Lewis Terman produced the Stanford-Binet Scale of Intelligence Tests with an elaborate standardization and the inclusion of the intelligence quotient concept proposed by Stern in 1912.
1917	Federal support for vocational education furnished through Smith-Hughes Act.
	New York City started special school programs for children with cardiac and other health problems.
1919	All states had legally effective compulsory education.
	The Seven Cardinal Principles of Secondary Education was published.
	The foundation was laid for special education cooperatives and intermediate units by Pennsylvania laws allowing school districts to join together to provide special education.
1920	First presidential proclamation of American Education Week.
	School census taking initiated in Massachusetts to determine the number of handicapped children in each school district; required of local boards of education and financed by the state. Special classes mandated where ten or more mentally retarded children found.
	Federal Civilian Rehabilitation Act signed by President Woodrow Wilson.
1922	Founding year of The Council for Exceptional Children.
1923	World Confederation of Organizations of the Teaching Profession organized in San Francisco; original name was World Federation of Education Associations.
	Oregon laws enacted to include gifted children as educationally exceptional children needing special education.
1926	First prototype of teaching machine and programmed instruction invented by Sidney Pressey at Ohio State University.

1930 In a national conference on child health and protection called by President Hoover, one committee was assigned to study the needs of exceptional children.

1931 A section on exceptional children was formed in the United States Office of Education and a professional educator was named a Senior Specialist to head the unit.

1941 The National Society for the Study of Education devoted a yearbook to the education of exceptional children.

1944 Initial GI Bill for veterans' education passed by Congress.

1950 National Association for Retarded Citizens formed; other parent groups with focus on specific exceptional conditions also began to press for special education and other necessary services.

Thirty-four states had laws subsidizing public school classes for all recognized groups of exceptional children.

1952 Federal Communications Commission reserved more than 200 channels for noncommercial television, providing functional base for educational television.

1957 Cooperative Educational Research Program launched by the U.S. Office of Education, with problems of mentally retarded children a priority concern.

1958 National Defense Education Act approved by Congress to improve instruction in sciences, mathematics, and languages.

Congress passed Public Law 85–926 to provide one million dollars to be allocated to colleges and to universities to train professional educators for special education of mentally retarded pupils.

1960 First book published on programmed instruction.

1961 Congress added funds to support preparation of teachers of deaf children and youth.

1963 Congress legislated funds to support training of educators for all recognized groups of handicapped children and youth and to subsidize research regarding their education.

1965 Elementary and Secondary Education Act provided major breakthrough in federal support of the schools, particularly for programs serving disadvantaged children and youth.

National Commission on Architectural Barriers established to study access and mobility problems facing persons with physical disabilities.

National Teacher Corps approved by Congress. Head Start made a year-round program. Elementary and Secondary Education Act authorized educational benefits directed mostly toward low income families.

1966 Regional educational research and development centers and laboratories established through the United States Office of Education.

Federal effort on behalf of handicapped pupils given added status, elevated to Bureau for the Education of the Handicapped in the Office of Education.

1967 Education Professions Development Act adopted by Congress.

1968 Federal Handicapped Children's Early Education Assistance Act approved to establish demonstrations of early education and to furnish models for state and local educators.

1969 Federal Elementary and Secondary Education Act amended to provide technical assistance to states for special education of gifted and talented pupils and to support teaching and research on children considered learning disabled.

1971 Special study of educational needs of gifted and talented pupils initiated by United States Commissioner of Education.

1972 Conclusions from legal actions in Pennsylvania and in the District of Columbia initiated a national move to open and improve education for all exceptional pupils within the context of regular education to the fullest extent possible and with guarantees of due process.

1973 Rehabilitation Act amendments guarantee rights of handicapped persons in employment and in educational institutions that receive federal monies.

1974 U.S. Supreme Court upheld right of non-English speaking students to bilingual compensatory education in English (*Lau* v. *Nichols*).

1975 Education of All Handicapped Children Act (Public Law 94–142) passed by the Congress and signed by President Gerald Ford.

1976 All states have laws subsidizing public school programs for exceptional children and youth.

The National Education Association and the American Federation of Teachers pass resolutions in support of teaching exceptional children in regular classes (mainstreaming) with appropriate support personnel and facilities.

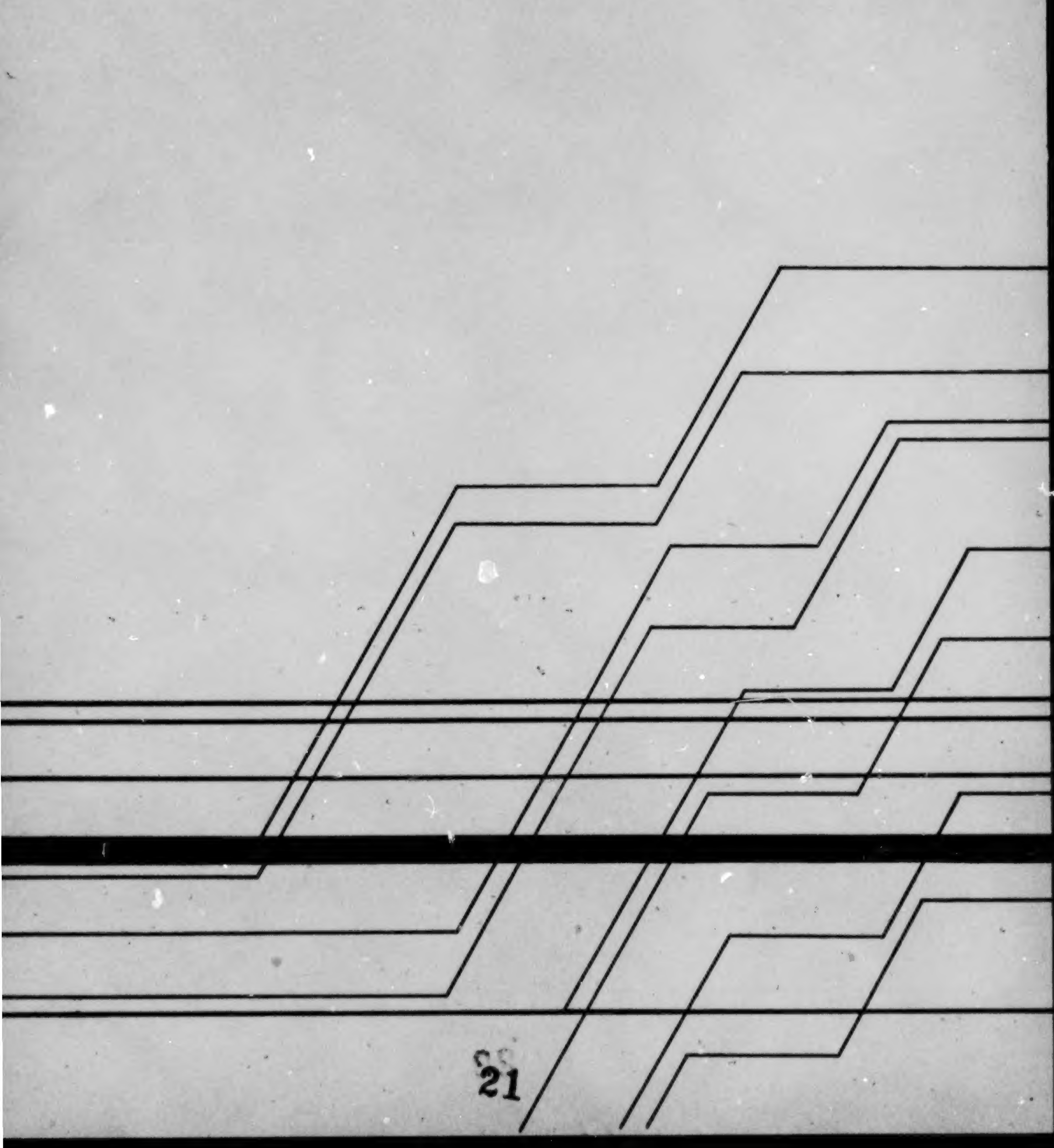
Four states require by law all regular class teachers to have preparation to include exceptional pupils in their classes.

1978 Public Law 94–142 (The Education of All Handicapped Children Act) became effective, assuring all handicapped children a full public education and a variety of accompanying rights.

1980 Cabinet level U.S. Department of Education officially instituted on April 1.

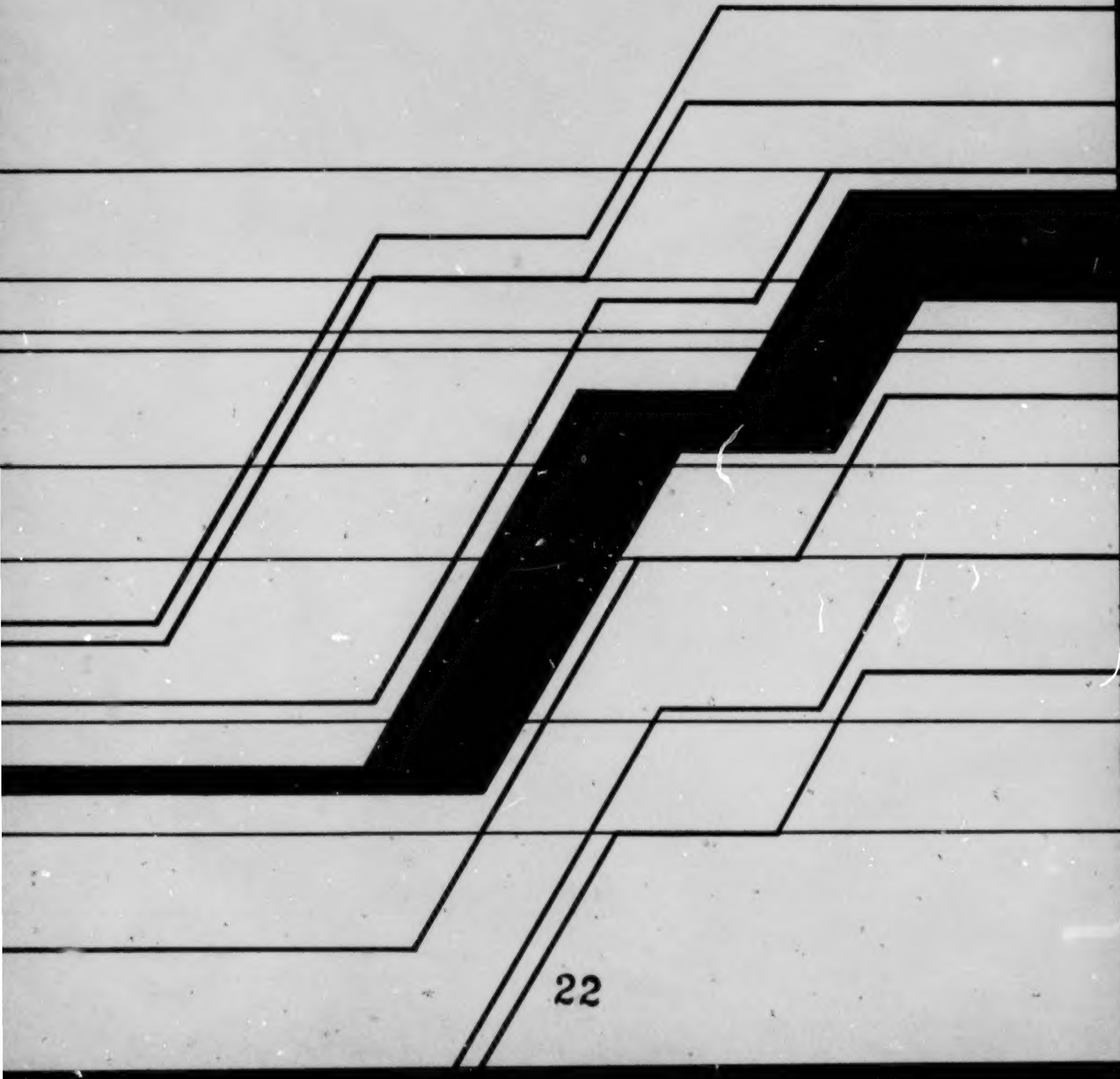
Year-round schooling for children with certain handicaps made law in Delaware and ordered by court in Pennsylvania.

1981 This year proclaimed by United Nations as International Year of Disabled Persons. Main purpose to encourage rehabilitation of the approximately 450 million handicapped persons in the world and to help them achieve full participation in the social and economic life of their communities.



CHAPTER 1

Psychoeducational and Historical Foundations



Chapter Outline

The Challenge to Educators
  An Elementary School Model
  A Secondary School Model
  An Area Vocational Technical Institute Model

Eight Forces Moving Special Education Ahead

The Meaning and Forms of Mainstreaming

The Changing Definition of "Exceptional Child"

How Many Exceptional Students?

Clusters of Professional Capability

A Brief History of Special Education
  19th Century: Residential Schools
  Early 20th Century: Community Prototypes
  1945 to 1970: Proliferation of the Special Class Model
  The 1970's: Negotiating for More Inclusive Arrangements
  The Movement Toward Mainstream Education

Topical Bibliography

The Challenge to Educators

Most exceptional students can be well served while they live at home and attend school in their neighborhoods.

This book is about good education for exceptional children. It builds on the premise that most children, exceptional as well as others, ought to have the opportunity to be together in school, home, and community settings, and that high-quality education can be provided under these circumstances. General illustrations of how this proposition has been made a reality in some communities are presented in this chapter, and more detailed examples are included in all succeeding chapters.

Experienced educators know that good teaching is neither simple nor easy. It is complex and demanding, and it would be foolish to pretend that there is any way to eradicate completely the problems associated with instructing children who are blind, gifted, physically handicapped, mentally retarded, or speech handicapped along with their less exceptional brothers and sisters in the same schools. Yet it is feasible to admit just about all children, including those with disabilities, into everyday regular education settings and to do a very good job of teaching them there. That is a dominant trend of modern education and it is what much of this book is about. However, to teach all children effectively, including those who are exceptional, it is necessary to have more than just a bag of tricks. Understanding the development of children, the background of special education and its philosophical, legal, and historical roots, and knowing the principles and practices of individualized programming are all significant parts of that something "more."

Knowledge of individualized programming is a necessity.

In this introductory chapter, consideration is given to the history of special education, to important policies related to special education, and to definitions of exceptional children, all with emphasis on the new concepts and practices. As a beginning, let's take a brief look at some examples of how instruction and related services can be organized to serve the educational needs of all children. The first vignette focuses on an elementary school, the second, on a secondary school, and the third, on a vocational school.

An Elementary School Model

Benjamin Harrison Elementary School has 16 "regular" classrooms managed by 16 "regular" teachers and a principal. In addition, the school operates a coordinated resource center headed by a lead special education teacher and staffed by two other teachers (one supported on special education funds, one on Title I funds[1]) and three FTE[2] teacher aides. All staff members of the resource center work very closely with each other and with the librarian/media center director, school nurse, and principal. In fact, all the specialists who provide services to children and teachers in the building work together. Although the resource center is located in one area of the building, about half its work is carried out by staff members in the regular class setting.

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[1] Title I refers to the first title of the well known Elementary and Secondary Education Act of 1965. In 1981, this law was changed, but a version of "Title I" programs is to be continued at reduced levels. It supports instructional services in schools that enroll economically disadvantaged children or students who have fallen behind their classmates in basic literacy skills. It is one of the major categorical programs funded by the federal government. Although it is not a special education program in an official sense, the boundary between Title I and special education programs is hard to define. Coordination of the two programs is greatly needed.

[2] FTE = full-time-equivalent; 6 half-time equals 3 FTE aides, for example.

Special services are unified.

When resource teachers or aides go into regular classes they adjust their special activities to the teachers' ongoing schedules and activities and they pull their weight by helping with general class duties. The deployment of aides in regular classes frees regular teachers to participate in diagnostic studies, IEP (individualized education program) conferences, and parent consultations.

The resource center is the coordinating unit for all the out-of-building specialists, such as the speech-language therapist, school psychologist, school social worker, or consultant on education for the gifted. Such specialists frequently come to the building to participate in case studies and reviews, to offer consultation and training, and, sometimes, to offer direct instruction or therapy.

The teacher requests consultation to solve problems.

When regular teachers are concerned about particular students, they request assistance from the lead special education teacher. All consultation, special assessment, parent consultation, and planning follow from that request. The teacher and lead special education teacher may call upon other staff members for assistance. For example, the library/media specialist may be asked to help in the selection or adaptation of instructional materials or the school psychologist may be asked to assist with further assessment and classroom planning. Any number of resource center staff members may take part in the assessment, planning, consultation, and instruction which are designed to help the regular teachers and the children who need extra assistance. Assessment stresses children's directly observable characteristics and their classroom environments. These observations are translated readily into instructional decisions rather than the categorical labeling of children. Labeling is held to the minimum required to satisfy state and federal mandates, and is not the primary focus of staff energy and effort.

Prevention is a major concern.

Resource center staff members work with regular teachers in all classes, but especially in the kindergarten and early primary grades. They observe all children carefully and design alternative approaches to individualized instruction for those children who show giftedness or who are not responding well to the ongoing instructional activities and may need special programmatic accommodations. Preventive activities occupy a high proportion of the resource center staff's time in the early weeks of each school year, and they remain a significant concern throughout the school year. The lead special educator also coordinates whatever in-building consultation and training activities may be required for students with special needs who are served by itinerant specialists.

In close cooperation with the principal and regular teachers, the resource center staff organizes individual conferences and group activities for the parents of exceptional students and makes certain that due process procedures, which are required under special education policies and regulations, are followed. The center offers formal parent education activities from time to time in addition to engaging in cooperative activities with the parents of specific pupils.

Parent involvement is actively solicited.

Using these approaches, the center serves about 80% of the exceptional children in this local school directly and continuously right in the building. Occasionally, the resource center staff, in collaboration with the regular teacher, parents, and principal, finds it necessary to refer a child with extraordinary needs to the district-level special education staff for instruction in a special class or educational center. In such cases, the resource center staff helps to conduct all necessary studies, parent consultations, and program monitoring. Finally, the staff actively assists in the eventual return of many of these children to the local school.

A Secondary School Model

When two special education teachers were newly assigned to Abigail Adams High School they met with the faculty to plan how they would organize their work. After much discussion and consultation, the principal pulled together everyone's ideas and set a plan in motion. The first phase of the plan was to be process oriented. Every teacher in the building would help by screening each class for students who had significant learning problems, and then suggesting that such students see one of the special education teachers. Signs of learning problems might be reflected in poor ability to read, to do basic mathematics, to write reports acceptably, or to comprehend subject content.

Only after several months of screening, referral, and consultation would the final structure of the new special education program be settled.

Special teachers worked directly in mainstream classes, at least part of the time.

Three principles were agreed upon in advance. First, exceptional students would be expected to take as much responsibility as possible in arranging their own program accommodations. Second, the special education teachers would not isolate themselves but, rather, would spend a high proportion of their time working collaboratively with the regular teachers in their classes. Third, the program would reflect the carefully examined needs of students, teachers, and the school as a whole.

During the first half year, 47 students approached the special education teachers. In general, they were underachieving badly, lacked goals for their high school work, were generally not involved in school activities, and were frequently absent. A significant number of these students were hostile toward adults and seemed to be headed for trouble of various kinds. Some showed very little academic talent but others were very bright. In sum, they were not so different from the rest of the student body at Abigail Adams High School in general intelligence and creativity. Included among them were some remarkably gifted and creative students who performed well when they were working on projects of their own design, but who had not found their high school program engaging in any way.

Students shared in the responsibilities.

Gradually, two kinds of programs emerged. The first was the formation of a resource center in which students participated and shared the responsibilities. A typical client of the center was Julian, a tenth-grade student who was having great difficulty in his academic classes because of a severe reading problem. His school attendance was dropping steadily and he felt that his teachers knew and cared little about him. Julian's parents were mostly inattentive and unconcerned except when he misbehaved, which was happening with increasing frequency.

When Julian came to the resource center for the first time, he was met by two fellow students who became his temporary advisers. They were sensitive to his feelings about his limited reading ability. They gave him several simple tests of basic skills and attitude inventories which they had been taught to conduct by the resource teachers. Julian reached an agreement with his two advisers concerning his difficulties in two of his classes. Together, they proposed contracts that the advisers would help to negotiate between Julian and the two teachers. In return for Julian's regular school attendance and strong efforts in these classes, the teachers would provide reading materials that he could handle and free him for some time each day so that he could come to the resource center for intensive reading instruction. The contract was worked out by having Julian's teachers come to the resource center for a full discussion of his needs and plans.

Student-teacher contracts established goals and expectations.

Through involvement in cases like Julian's, almost every teacher in the building comes in and out of the center. There they meet students who, with the help of other students, are petitioning for adjustments in their school programs. The center itself is rich in materials. It is led by a sensitive, specially trained teacher who often consults with other teachers about program accommodations and adaptations in materials for students who have special needs. A teacher's aide was promised for the following school year to help enrich the center's programs. When the aide becomes available it is anticipated that the teacher now assigned to the center will have more freedom to move out for consultation with and assistance to regular teachers.

It should be noted that each principle agreed upon initially was followed nicely in this part of the Abigail Adams High School program: Rather than isolating themselves, the special education teachers worked with regular teachers to make appropriate accommodations in school programs; students took leading roles in creating a school environment that is livable and helpful for exceptional students; and each student's individual needs were carefully considered in planning programmatic adaptations.

Intensive teaming features cluster work.

The second program developed at the high school centered on co-teaching by a special education teacher and selected regular teachers. In the first year, for example, a special education teacher teamed with a teacher of sophomore English and a teacher of Modern American History. Altogether the special education teacher spent three periods a day as a co-teacher, working with clusters of about ten "exceptional" students in each class. The possibilities for exciting ventures into new and varied methods of instruction increased dramatically with two teachers in the classroom. Sometimes tape-recorded reports or dramatic presentations were substituted for written reports; interesting adaptations were made in reading materials; and the number of field experiences and visiting experts to the classes was increased.

In a sense, the special education teacher provided the extra "developmental capital" needed for a period of time to enrich instruction in two of the most important courses offered in the high school. Not only were the clusters of exceptional students served well, but the nonhandicapped students (about 20 in each class) were intellectually stimulated as well. By the end of the first year, a long waiting list for the following year's enrollment in these two classes was established.

Next year, the special education teacher will work with a third regular teacher, reducing the amount of time spent in sophomore English and Modern American History. An increasing number of other teachers are ready to co-teach and to expand their roles in serving exceptional students. Everyone has agreed on the importance of making special arrangements for students who are gifted as well as for those who have disabilities.

Success is contagious.

An Area Vocational Technical Institute Model

The area vocational technical institute serves a large region that includes several high schools. This institute has taken seriously the need to accommodate the exceptional needs of handicapped and disadvantaged students, most of whom are teenagers and young adults. About 350 of the 2,500 full-time students enrolled in the institute are handicapped, as defined by special educators. Many more could qualify as disadvantaged or as having "special needs."

The institute has set up a strong vocational evaluation unit in which students can explore their abilities and interests and then try out various occupational roles through work sample situations. Several vocational evaluators who are employed at the institute have had special training to work with exceptional students, but all students, including those who are handicapped, are in the same evaluation unit. Some students may get more attention than others but, if they do, it is in the context of their specific strengths, limits, needs, and interests. No separate list of handicapped students is maintained, and no handicapped students are in special placements.

There are no special placements; supports are provided wherever they are needed.

The institute also provides an intensive support system through the operation of a learning center for students who need extra academic help in order to survive in the various vocational training programs. Students who come to the center are those who need to be there. If one were to classify them, they would undoubtedly include so-called "LD's," "EMR's," and others,[3] but there is little such labeling in the school.

If one were to follow students as they move from class to class, one would see "interpreters for the deaf" working with teachers in the various shops, labs, and classrooms in order to support students who need such special

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[3] Special educators have made common use of a variety of abbreviations for various categories of exceptional children; for example, LD = learning disabled, EMR = educable mentally retarded, ED = emotionally disturbed, and TMR = trainable mentally retarded. We prefer to use such terms sparingly and to use other approaches to issues in the classification of children. However, familiarity with the common abbreviations is essential for all educators.

Mainstreaming means that children who need special supports are receiving high quality special education while they enjoy the personal and social advantages of life in regular school classes with all the other neighborhood youngsters of their age. It also means that high quality regular education is going on at the same time. Further, it means that the regular teacher coordinates all pupil activities with the assistance of a staff of special educators, aides, the school principal, and other specialists. Together with parents, these personnel make up a team whose central concern is topflight instruction for all children.

Student independence is encouraged.

accommodations. Comparable supports have spread throughout the building, but only to the degree and for the periods of time that are essential. Students move on their own as soon as they are able to do so. It should be noted that attendance and retention rates are especially good at this institute, and behavior problems are at a minimum.

Eight Forces Moving Special Education Ahead

Programs of the kind described in the preceding vignettes illustrate preferred practices. Although such programs do not yet exist with high frequency, schools in the United States, Canada, and most of the world are beginning to show many of their salient features. Changes are occurring in education for handicapped and gifted students that impinge on the roles of all teachers and principals. Consider the following recent events and developments in the United States:

All children have a right to education.

1. *The wave of judicial pronouncements on children's right to education and right to appropriate education in the least restrictive environment, and parents' right to participate in placement decisions.* Following a 1971 federal court case (*PARC* v. *Pennsylvania*), the state of Pennsylvania found itself obligated to undertake a search for all retarded children in the state and immediately to initiate programs that would provide each such individual with an appropriate education.
2. *The virtual "shutdown" on school exclusions, expulsions, and suspensions.* In a landmark decision in 1975 (*Goss* v. *Lopez*) the Supreme Court moved a long way in protecting student rights to education and, by implication, against school demissions of any kind; the Court made it clear that school principals and teachers may face legal action if students are suspended or expelled from school for any but the most compelling reasons, and, even then, only by following careful procedures.

The impact of deinstitutionalization on local schools is evident.

3. *The return of many persons from residential institutions to the community and to the local schools.* In many states the populations of state-operated schools and hospitals have been reduced by more than half in less than a decade. The impact of this shift can be seen in every aspect of local school

operations: in the children who ride buses, in the populations of classrooms, and on the school board agenda.

4. *The launching by local schools of programs for persons formerly believed to be uneducable.* Most school systems for some years have conducted programs for handicapped students, but now the press is on to extend schooling to those handicapped children and youth whom the schools previously excluded.
5. *The rapid erosion of the traditional boundaries between regular and special education and the emergence of mainstreaming policies.* The refer–test–classify procedures by which many children were sent to isolated classes and centers have become suspect, and more handicapped students are now retained in regular classes through special education supports.

"Special" doesn't mean separate.

6. *The emergence of new support roles or indirect roles for special education teachers, including team teaching and consultative relationships with regular educators.* As fewer children with special needs are referred out of regular programs, specialists are able to work more often in the regular class, teaming up with regular teachers to assess, plan for, and teach exceptional children. In the process, the roles of other teachers are changing also.

Mainstreaming policies emerge, and the roles of teachers change.

7. *The requirement that parents be notified before any special diagnosis or assessment of their children is undertaken for purposes of educational planning.* What has always been considered good practice in many school districts is now being established formally as a parental right under federal and state statutes.
8. *The serious objections by many parents and minority groups to prevailing systems of testing, classification, and placement of children in special classes.* In California, educators have had to limit the use of individual intelligence tests because of court cases in which advocates of minority group children argued persuasively that such tests have been used unfairly to classify and stigmatize some children. In New York City, a two-year inservice training program was required for all teachers (numbering about 70,000) as a result of a court decision on the referral, evaluation, and placement of so-called "emotionally disturbed" students.

Old classification systems have been cast in doubt.

These eight developments have a common theme: the inclusion of more children who have special needs in the mainstream of community and school life. They signify the reversal of the negative, rejection-oriented philosophy that permitted schools to pick and choose among the children to be educated. They also signify the demise of what has been called the "two-box" theory of education, that is, the view that there are two kinds of children (exceptional and normal) and two kinds of school systems (one "special" for the exceptional children and one "regular" for the normal children). The principle of inclusion is expressed in law (Public Law 94-142, the Education for All Handicapped Children Act of 1975) as the *least restrictive environment* provision. The relevant language of the Act is as follows:

"Special" and regular school programs are now moving toward unity.

> To the maximum extent appropriate, handicapped children . . . are educated with children who are not handicapped, and . . . special classes, separate schooling, or

> other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.

There are significant differences between Canadian and United States right-to-education laws that are especially pertinent for exceptional children. At both the national and provincial levels, limitations on eductational opportunities are being challenged. The Canadian exceptional child advocacy movement is described by Swindlehurst and Eberline (1981) using Alberta as an example.

In sum, judicial, legislative, and social developments encourage unified school systems in which exceptional students are part of the educational mainstream to the maximum extent feasible. In popular terms, these developments are known as mainstreaming.

The Meaning and Forms of Mainstreaming

Mainstreaming is more than merely enrolling handicapped children in regular classes. Refusing to refer children for special education services or simply dumping children with special needs into unprepared class situations is a cruelty to everyone: pupils, teachers, and parents. When this misconception of mainstreaming is translated into practice, children become the pawns of administrative moves; they are placed according to administrative ploys rather than their educational needs.

The mainstream itself must be changed.

The locus of action in mainstreaming is the neighborhood school and all of its classes. Major efforts are required there to change the composition of the mainstream and to develop and support programs that effectively serve all children, including those who have special educational needs. A basic component of mainstreaming is the provision of individualized school programs for all children with exceptional needs so that fewer displacements from the mainstream to special, isolated settings are necessary.

The Council for Exceptional Children (a national organization with a membership of 62,000 special educators) described the school environment in which exceptional children should be educated in its official (1976) definition of mainstreaming:

> Mainstreaming . . . involves an educational placement procedure and process for exceptional children, based on the conviction that each such child should be educated in the least restrictive environment in which his educational and related needs can be satisfactorily provided. This concept recognizes that exceptional children have a wide range of special educational needs, varying greatly in intensity and duration; that there is a recognized continuum of educational settings which may, at a given time, be appropriate for an individual child's needs; that, to the maximum extent appropriate, exceptional children should be educated with nonexceptional children; and that special classes, separate schooling, or other removal of an exceptional child from education with nonexceptional children should occur only when the intensity of the child's special education and related needs is such that they cannot be satisfied in an environment including non-

> exceptional children, even with the provision of supplementary aids and services. (p. 43)

This statement envisages a transformation of both special and regular education. For decades, the rhetoric of progressive education centered on individualized programming for every child. Special education now may make possible the achievement of that lofty goal.

In this volume, the term *mainstreaming* is used to refer to all the processes by which students who have exceptional needs are given high-quality education while they remain in their own homes and in school programs that encompass both handicapped and nonhandicapped peers. This does not mean that handicapped children and youth receive less special education than before, but that they receive it, whenever feasible, in regular classes and schools rather than in special places set apart for handicapped students.

Mainstreaming comes in more than one form.

Mainstreaming takes three general forms: physical space mainstreaming, social interaction mainstreaming, and instructional mainstreaming. The three make up a hierarchy, as shown in Figure 1-1.

The first, *physical space mainstreaming,* is the most elemental and the simplest form. It means that exceptional children are physically present in the same school building as other children. In its plainest form, exceptional and other children attend the same school and use its facilities at the same time. All children have daily opportunities to recognize that they are citizens of the same world, that their life spaces overlap, and that they have much in common.

Social interaction mainstreaming is a step beyond being simply educated under the same roof. It not only entails being in the same building, but also calls for deliberate and planful social interactions, arranged by the school staff. It means the mingling of exceptional and other children in ways that allow them to get to know each other as persons and to engage in the common social relationships of children and youth.

The most complex form is *instructional mainstreaming.* It includes physical and social mainstreaming, plus instructional mainstreaming in academic and special subjects. That is mainstreaming in its richest sense.

Degree of mainstreaming should reflect student readiness.

Thus, it is feasible to talk of exceptional children being physically in the mainstream, while living and being instructed only in the company of other exceptional children. For some youngsters, that elemental level is the greatest degree of mainstreaming possible at a given time. An example might be a small group of autistic children, aged 12 to 14, attending a regular middle or intermediate school. These children, with a teacher and an aide, and with psychological and other consultant services as needed, might well occupy a suite near the school's center, located with proper consideration for their requirements. It could well be that all of these students require instruction full time by special educators and are not able to participate at all in regular classes. In fact, their characteristic morbid self-centeredness, their steady concentration on themselves, their constant daydreaming and fantasy, may render them virtually inattentive to each other, much less the busy swirl of young humanity populating the rest of the school.

An example at the second, or socializing, level might be a group of 10 to 15

FIGURE 1-1
Levels of Mainstreaming*

NSTRUCTIONAL		*Exceptional children:* Are taught along with all other children in same instructional space in some or all curricular areas, though instruction is individualized.	*The exceptional child:* Interacts with regular teachers and children and with special teachers and children, commingled, in learning, socialization, and use of physical space.
OCIAL		*Exceptional children:* Use the same school socializing spaces (halls, playgrounds, buses, cafeteria, auditorium) with all other students.	*The exceptional child:* Interacts with regular and special children socially; taught by special teachers only.
HYSICAL	*Increasing Desirability*	*Exceptional children:* Attend school in the same building as nonexceptional children, but participate in social and instructional activities only with other exceptional children.	*The exceptional child:* Interacts only with special teachers and children in a designated physical space.

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he objective is to establish and maintain instructional mainstreaming. As this figure illustrates, at objective is best attained from a foundation of physical and social mainstreaming.

year old children who have markedly slow cognitive development (are considered severely retarded) and who attend school in their own assigned space in a regular elementary school. Their teacher and aides stimulate and assist them in language development, self-help in feeding, simple play, toileting, and the like. These youngsters may not yet have reached the developmental levels of typical kindergarteners. They are, however, responsive to attention, music, affection, simple recreation like rocking and clapping, and they recognize and greet children and adults in their surroundings. Thus, there can be meaningful social interactions with other pupils in the school if interactions are deliberately planned and engineered to take place in ways that are mutually pleasing and helpful to exceptional children and to the other children.

The most complex level of mainstreaming, the instructional level, can be illustrated in many ways. Illuminating examples are found among totally deaf children and among totally blind children. Modern preschool preparation, technology, and support systems are so well developed today that otherwise normal children who cannot hear at all, even with hearing aids, and children who cannot see at all, even with glasses, can enter kindergarten at the usual age and continue through school without ever leaving their regular classmates. Not all do, but that is only because the needed and available know-how, technical facilities, and special education support services are not yet being brought to them while they attend regular classes.

Mainstreaming at the instructional level is the most complex form.

The main point, though is that many exceptional children, more than once was supposed, can readily attain the highest level of mainstreaming. They can receive the appropriate combination of regular and special education they require while going to school full time in regular classes with other children from their own neighborhoods who are also receiving high quality education. That is possible because more and more of special education has been made portable; it can be brought to the child in the regular class rather than the child needing to go out to find the special education elsewhere.

The Changing Definition of "Exceptional Child"

Categories and labels are mostly irrelevant for instructional purposes.

Until recently, the *prevailing* definition of *exceptional children* listed, in one way or another, those who are gifted, retarded, blind, partially seeing, deaf, hard of hearing, crippled, neurologically impaired, disturbed, maladjusted, speech and language impaired, learning disabled, developmentally disabled, and others, plus those who have combinations of these conditions. But it is now recognized that the teacher's and principal's legitimate concern is the educational work to be done with the pupil rather than the medical or legal term for the child's condition. Thus, a preferred definition of exceptional children for us focuses on all those pupils who need some form of special education—part time or full time, for short or long periods—at some stage in their schooling. The terminology we use to denote exceptional children in the following chapters includes some traditional categorical language of special education in order to bridge historical and contemporary usage and, at the same time, to indicate possibilities for the future.

This is a time of transition in the language of special education.

Heretofore, special education was considered to be an instructional activity carried on outside the regular classroom by an expert with a particular type of pupil. Some state regulations are still phrased in this manner. The view achieving prominence today, though, sees special education as the individualized application of procedures that are designed to accommodate to unusual forms or rates of children's development, sensory deprivation, lack of earlier schooling, ineffective earlier instruction, or any other personal or environmental condition that stands in the way of a broad and thorough education. Most, if not all, special educational procedures, materials, and equipment are readily adaptable for use by all teachers. Hence, an exceptional child's individualized education program is usually a combination of regular and special education. Most of the time, too, the program can be conducted within the context of usual class activities under the regular teacher's direction, with support from specialists, aides, and classmates.

Gifted students are sometimes handicapped.

Relatively little has been said so far about gifted and talented children, those with high intellectual abilities and talents who are able to learn very rapidly, even complex subject matters, at early ages. Such children may also be handicapped in some way. They need to be identified and well understood and served lest they suffer educational neglect or denial. Much of the federal legislation and court actions relating to special education has been restricted to handicapped children and has not included the gifted and talented. A few states have organized strong programs on behalf of gifted students, however. For example, in North Carolina and Pennsylvania, provisions for the specialized support of programs for handicapped students were fully extended to gifted children and youth at an early date. Many local school districts offer special programs for gifted students despite governmental actions or inactions in the field.

Interest in programs for gifted students is growing.

In recent years, fortunately, a concerted interest in gifted and talented students is evident at both state and federal levels. In the 1970's the U.S. Department of Education launched small programs to support training and research in the education of such students, and responsibilities for leadership began to be clarified in federal and state offices. As a result of 1981 legislation, funding provisions for federal programs for the gifted and talented were included in a block grant with several other educational programs. Thus, some of the specific efforts well underway under federal leadership may be difficult to sustain. It is clear, nevertheless, that the attention of special educators should flow fully to all students who have special needs, gifted as well as handicapped. It is equally clear that regular teachers should be concerned with the full range of talents and needs found in all children and youth.[4]

How Many Exceptional Students?

How many students are exceptional? How much program are we buying in the name of special education? Visits to different school systems unquestionably would lead to a variety of answers. In one major city, for example, estimates of the percentage of students receiving special education services reflected several different answers:

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[4] The term "exceptional," whenever it is used in this book, comprises handicapped, gifted, and talented students.

- *5%:* About 5% of the students receive one or more types of special services regularly *for the entire school year.* Included in this group are severely, profoundly, and multiply handicapped students; young children who receive daily instruction in braille or other highly specialized subjects; and some particularly vulnerable or fragile students who have needed rather protracted help in specialized environments. So, if one means by "exceptional children" this kind of very distinctive group receiving protracted services, the answer would be 5% of the general child population.
- *10%:* About 10% of the students receive specialized educational assistance *on any one school day.* This estimate includes the 5% who receive services in year-long programs; the other 5% is made up of students who receive only short-term or occasional help from specialists such as speech therapists, resource teachers, or others.
- *20%:* About 20% of the students receive special services *at some time during the school year.* To provide 10% of the students with some form of special services on an average school day, the schools actually serve some 20% of the total student population over a total school year. Because the identification of exceptional students is not a one-time census it can be argued that the 20% estimate is meaningful.

Different criteria lead to varying estimates.

If students were followed from kindergarten through grade 6, how many would be found to need some kind of special education or related service for at least a brief period? In one of the few studies that answer this question (Rubin & Balow, 1971), about 40% of elementary school children were found to need a special service at some time. When their longitudinal study was extended into secondary school years, Rubin and Balow (1971) reported informally that the percentage of students needing specialized assistance at some time during their public school years continued to rise above the 40% level.

Returning to the question of how many exceptional children there are, we can see that the answer is complex. In general, special educators consider that they share in educational responsibilities for about 10% to 12% of all children at any given time. Many states have funded special education programs at that level, and the U.S. Congress framed Public Law 94–142 with a 12% figure as a ceiling. The figure seems reasonable for the percentage of handicapped children who may need special education and/or related services on any given school day. However, to include highly gifted students, the figure should be higher, perhaps 15%. When the total estimated population of 15% of all students is broken down into categories, speech correction and educable mental retardation are each credited with 1 out of every 5 exceptional children.

In the context of modern, dynamic educational planning, however, it is no longer useful to think in terms of a static set of children at the 10% to 12% level who are distributed among subsets by traditional categories. The Rubin and Balow (1971) studies make this fact plain. Furthermore, a number of

Categorical language is no longer useful for educators.

judicial determinations have made the use of categorical language suspect. For example, because some of the courts have raised serious doubts about the procedures used to classify students in the range of mental retardation, we can expect to see a larger percentage of minority group children classified as learning disabled rather than educable mentally retarded (Tucker, 1980).

Clusters of Professional Capability

Changes affect preparation programs.

In the current context of rapid change, it is necessary to look at exceptional students and special education in new ways. A number of changes are underway in the functions and roles of teachers and other school personnel, and universities can expect to make corresponding changes in their preparation programs. Since 1975, the Office of Special Education and Rehabilitative Services of the U. S. Department of Education has been supporting what it calls "Dean's Grant Projects." These projects are intended to help teacher educators change their programs in accordance with new policies governing the education of exceptional students.

A U.S. District Court ordered that certain exceptional children are entitled, without cost to the parents or guardians, to more than 180 days of schooling in a calendar year. That order was upheld on July 15, 1980, by the U.S. Third Circuit Court of Appeals. Excerpts from the District Court decision follow:

For the purposes of this Order, a handicapped student shall be deemed to require an education program in excess of 180 days per year if he/she meets the following standard:

"A handicapped student is entitled to an education program in excess of 180 days per year if regression caused by an interruption in educational programming, together with the student's limited recoupment capacity, renders it impossible or unlikely that the student will attain the level of self-sufficiency and independence from caretakers that the student would otherwise be expected to reach in view of his/her handicapping condition. . . .

*"Since each handicapped child learns differently, progresses, regresses and recoups at different rates and has a different capacity to obtain self-sufficiency, it is not possible to set down any absolute rules which automatically dictate that all children with a particular handicap or IQ level have a need for continuous programming. . . . [The decision about what is] required, must be made on an individual basis." (*Armstrong *v.* Kline, *Sept. 5, 1979, in the United States District Court for the Eastern District of Pennsylvania. Now filed as* Battle *v.* Scanlon.*)*

Note: On June 22, 1981, the U.S. Supreme Court decided not to hear an appeal of this case; thus, the original order was upheld.

A view covering a common body of practice for all teachers is emerging.

A major paper emerging from the Dean's Grant Projects has specified ten clusters of capability which should now make up part of the common body of knowledge and practice for all educators (Reynolds, 1980b). These are summarized briefly here to suggest the broad implications for teachers, principals, and other school personnel of the new policies on education for handicapped students.

Curriculum. All teachers and other school personnel should have a broad understanding of curricula for grades kindergarten through 12 and should be prepared to analyze and modify them to meet individual student needs.

Individualization of Instruction. All educators should be prepared to study individual pupils, to devise explicit plans for the instruction of individuals, and to function within organizational systems that foster individualization of instruction.

Every teacher should be able to teach the basics.

Basic Skills. All educators should be prepared to teach the basic literacy, life maintenance, and personal development skills.

Class Management. All educators should be skilled in managing students in complex activities, including group alerting processes, management of transitions, creating a positive affective climate, and managing crises.

Student Observation and Referral. All educators should be skilled in making systematic observations of individual students in a social setting, as well as in other forms of data gathering. They should also be skilled in making referrals to other professionals and agencies for additional help, when needed.

Student-Student Relationships. All teachers and other school personnel should be prepared to create social structures in classrooms and other school settings where students learn to understand and appreciate diversity in human characteristics, are mutually helpful to one another, and are able to work effectively in cooperative ways.

Consultation skills are increasingly critical.

Consultation. Teachers and other school personnel should be skilled in consultative relationships; that is, in helping one another to serve students who have special needs. This view is based on the assumption that under new policies the first duty of a teacher, upon observing that a student may need help, is to call in a consultant rather than to make a referral to remove the student from the mainstream.

Parents and Family. All educators should understand family life and know how to work with the parents of their pupils. Particular emphasis is needed on developing an understanding of minority group and other disenfranchised families, and on work with parents of handicapped and gifted students.

Exceptional Conditions. All school personnel need to understand the exceptional conditions that influence the lives of some students (such as slow intellectual growth, sensory deficiencies, physical limitations, emotional problems, and special talents, as well as common procedures to accommodate such conditions. An understanding of the roles of specialists who often are called upon to help study and serve exceptional students is also important.

Legal and Ethical Considerations. All educators need to be well informed regarding the legal basis for the provision of education and related services for exceptional students. They should also have strong orientation to the professional values, commitments, and codes that relate to teaching.

All teachers need these capabilities to assure proper instruction for all children.

These clusters of capability were posited on the fact that more instruction for exceptional students than ever before is now going on in regular classes. This situation calls for special educators, school psychologists, speech-language therapists, and other specialists to work at least part of the time in mainstream settings (regular classes) as a support system for exceptional students and their teachers. A massive renegotiation of roles commenced in the 1970's and 1980's between specialists and regular teachers; this process requires mutual respect for and sensitive appreciation of the personal as well as technical difficulties of role changes. These changes do not imply diminished roles or opportunities for employment of specialists, but they do call for different functions, many new kinds of work stations, more collaboration, more public activities, and more explicit planning.

A Brief History of Special Education

A brief survey of the history of special education will provide additional perspectives on the changes occurring in special education programs.[5] Especially noteworthy is the longstanding trend to move toward more inclusive arrangements for the education of persons who have special needs. Major forces that have operated to stimulate changes over time are also noted.

Pioneer work in Europe emphasized the care of blind, deaf, and retarded children.

The history of education for exceptional children is mainly a simple story of massive neglect, denial, and rejection. For every Helen Keller and the other notable few who received intensive special help, tens of thousands of other exceptional children, both gifted and handicapped, were doomed to constricted lives. It was believed that they could not be taught, were not worth teaching, or could proceed on their own. In a sense, the development of special education can be recounted as an assault on this discriminatory attitude. It began in the early 19th century with a handful of dedicated pioneers such as Gaspard Itard (1774–1838) and his student Edouard Seguin (1812–1880), who began the study and training of children described as mentally deficient; Samuel G. Howe (1801–1876), who started the first school for the blind in the United States and proved by his work with blind and deaf Laura Bridgman that the blind could be educated; Thomas H. Gallaudet (1787–1851), who organized the first school for the deaf in the United States; and Louis Braille (1809–1852), the inventor of the system of writing that bears his name. In the early years of the 20th century Sidney L. Pressey, Lewis

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[5] Selected key dates and events begin on p. xiii.

Terman, and Leta Hollingworth publicized the educational potentialities of gifted students, as well as their neglect. Tracking (establishing separate sections for the most able students) began in St. Louis, Missouri, in 1871, and in Elizabeth, New Jersey, in 1886. Separate special classes for the gifted, sometimes called opportunity rooms, were recorded at Los Angeles State Normal School in 1924 and in Cleveland in 1922 (Newland, 1976).

Formal arrangements for the education of handicapped children in the United States can be divided into four periods, as shown in Table 1–1. Brief reviews of each of the first three periods are followed by a somewhat more extended treatment of the fourth and current period.

19th Century: Residential Schools

The first organized arrangements in the United States for the education of blind, deaf, and retarded children were copied from the residential schools and asylums of Europe; they set the dominant early pattern for special education in the United States. They tended to be narrowly categorical in orientation. Because colleges and universities did not yet offer relevant professional training programs, residential schools prepared their own teachers through on-the-job training.

Residential schools were the first form of special education.

Most states did establish residential schools, sometimes after private institutions had demonstrated that the target population was educable; nevertheless, all exceptional children were not accommodated in such institutions. Facilities were limited in the state-operated schools and the private ones were too expensive for many families. Some parents considered separation from their children more onerous than depriving them of educational opportunities and simply kept them at home. Children with severe and multiple handicaps were often ineligible for admission to any school.

Residential schools, both public and private, are still in existence. Increasingly, however, they are used only for selected individuals who present severe and multiple problems, or for students from extremely isolated communities where the specialized resources necessary to instruct them have not yet been developed. In scattered localities, private residential schools address the needs of children who are not well served by public schools. Sometimes, on behalf of their children, parents have used extraordinary pressures to force public school financing of education in such private schools.

Early 20th Century: Community Prototypes

Community-based special classes and schools for the exclusive education of exceptional children began to appear at about the turn of the century. In their earliest forms, these programs were dependent on residential schools for leadership, curricula, and teacher preparation. Gallaudet College, for example, which was established to serve deaf children, started a teacher training program in the 1890's (Craig, 1942), and in 1904 the Vineland Training School in New Jersey began summer training sessions for teachers of retarded children (Hill, 1945).

Special classes and schools emerged early in the 20th century.

TABLE 1–1
Education of Exceptional Children in the United States

Approximate time periods	*Events*	*Modal programs format*
Late 19th century	1. European models for education are transported to the United States by immigrants and visitors. 2. Most states begin to accept a *public* responsibility for the education of the handicapped—earliest progress is made in areas of blindness and deafness, and later in mental retardation.	Residential school
Early 20th century (ca 1900–1945)	1. Many cities begin local special classes. 2. Residential institutions begin to train specialized teachers for local school special programs.	Prototype community-based programs (the special class and special school)
ca 1945–1970	1. Parents of exceptional children organize for political action. 2. Many colleges and universities launch preparation programs for specialized teachers. 3. State and federal legislative action moves strongly to support special education.	Proliferation of the special class model
Beginning ca 1970	1. Parent groups move increasingly to the courts to stimulate more services for handicapped and gifted children. 2. The civil rights movement spreads from race and sex to the handicapped. 3. Minority groups object to high rates of negative classification of children. 4. Regular teacher education begins to include components on exceptional children. 5. Comprehensive federal legislation incorporates concepts of right to education and least restrictive alternative (Public Law 94–142 of 1975).	Negotiations for more inclusive arrangements; the period of the least restrictive alternative or mainstreaming.

At their best, these early programs reflected a bare tolerance of exceptional children in community schools, except for the gifted who, often undetected, were "getting by." The special class and special day school movement developed slowly. During the first half of the 20th century, most children who were noticeably different or difficult to teach were permitted to attend school for minimum periods only. Children who progressed slowly in academic subjects frequently were forced to repeat grades until they became embarrassingly oversized in comparison with their classmates. When special classes were instituted for such children, the labels often given to those who attended them took on derogatory connotations.

Special classes often meant derogatory labels for children.

Until comparatively recently, of course, public schools had never seriously tried to serve all children, and especially not those who were difficult to teach. Indeed, during the first decades of this century, most children attended school only long enough to acquire the rudiments of a basic education. Consequently, school systems were not prepared to operate far-reaching programs for exceptional children. Special education is costly because of its emphasis on individual problems and needs. Therefore, when school budgets were limited, as during the Depression of the 1930's, special class programs were not expanded.

The general neglect of atypical children, which was evident well into the 20th century, was not a deliberate and callous deprivation, perhaps, but an outgrowth of certain ideas that were pervasive at the time. Sloan (1963), for example, attributed the lethargy of the early 1900's toward the education of intellectually retarded students to the widespread public misinformation on genetics and criminal tendencies and the accepted attitude that mental retardation was generally a hopeless condition. It was also widely believed that mental precocity was closely akin to mental illness and that unusual brightness in children was most often a temporary flash in the pan. "Early ripe, early rot" was an oft-quoted axiom.

Public misinformation contributed to neglect.

In Buck v. Bell *(1927), Supreme Court Justice Holmes supported a sterilization policy for retarded citizens. He wrote, "It is better for all the world, if instead of waiting to execute degenerate offspring for crime or to let them starve from their imbecility, society can prevent those who are manifestly unfit from continuing their kind" (p. 207).*

In the 1930's, research findings about the "rigidity" of the mentally retarded tended to become diffused in the public consciousness; the provision of special educational opportunities for them seemed useless. The research was faulty in that the mentally retarded persons studied were those in institutions. Later studies showed that the apparent "rigidity" was a function of the institutionalization rather than the retardation per se. Thus, delay and denial were the educational lot of most children with handicaps throughout the first half of the 20th century. (Zigler, 1969)

Nevertheless, during the 1920's and 1930's, some progress was evident. For example, formal programs to train specialized teachers to work with exceptional pupils were instituted in a few universities, first at Wayne State University and the Teachers' College of Columbia University, and then at Eastern Michigan University at Ypsilanti and the University of Wisconsin at Milwaukee. The roles for which teachers were prepared were modeled mainly on those developed in the residential schools. On the basis of existing practices, it was assumed that exceptional children should receive the services of special teachers in special environments. Little attention was given to familiarizing regular teachers with the needs of exceptional students.

Teacher's roles reflected the residential model.

1945 to 1970: Proliferation of the Special Class Model

As if to atone for the neglect of centuries through one massive effort, a remarkable surge of activities on behalf of all exceptional children began shortly after World War II. Several of our largest states, including California and Illinois, launched programs to serve exceptional pupils in the public schools on a broad scale. Other states quickly followed their lead. Numerous colleges and universities organized programs to train special teachers.

The change that occurred over this 25 year period is best reflected in statistics (see Figure 1–2). In 1948, 442,000 children were enrolled in special

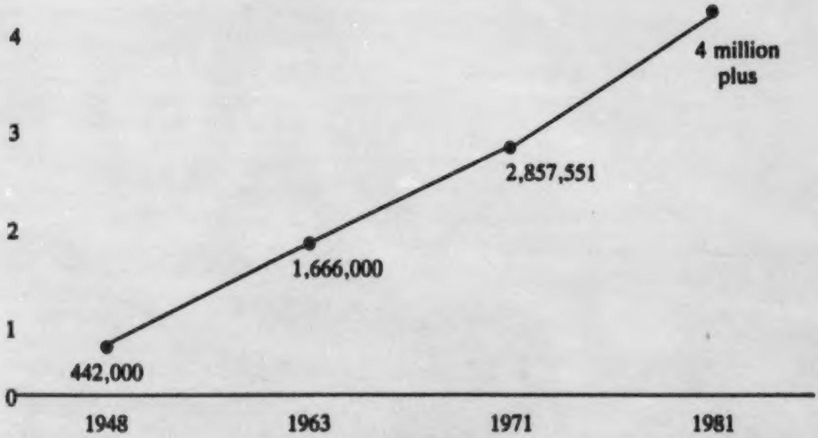

FIGURE 1–2
Numbers of Exceptional Students Enrolled in Special Education Programs in the United States

education programs in the United States. By 1963 the number had increased to 1,666,000 (Mackie, 1965). According to estimates of the Bureau of Education for the Handicapped, 2,857,551 handicapped children received special education services during the 1971–72 school year. In 1981, more than 4 million children were receiving such services. These data reflect more than a sixfold increase, even though they do not reflect what was happening in services for gifted pupils.

Statistics show dramatic increases in the numbers of children served.

Much of the increase in the number of handicapped students enrolled in special education in the post–World War II period represented extended categories of exceptionality. That is, large numbers of students who were considered to be behavior problems or emotionally disturbed but who did not manifest major disabilities or illnesses were referred out of regular classes to special education. At the same time, the category of EMR (educable mentally retarded), the highest level of impaired intellectual functioning, grew substantially, especially among certain segments of the school population. In addition, the category of learning disabilities (LD) came into existence. Although LD was difficult to define and sometimes was used as a euphemism for mild retardation, it grew more rapidly than any other category in terms of the number of children so classified.

It was the widespread assignment of students to these extended categories that created considerable controversy in the 1970's and raised fundamental questions concerning the practices of labeling children. These extended categories are still very much at issue in the assignment of students to mainstream classes.

Categorical assignments raised questions.

The increase in training programs for special education teachers was almost as great. About 77 colleges and universities were providing training sequences for special education teachers in one or more categories in 1948. By 1954, the number was 122 (Mackie & Dunn, 1954) and by 1973, it was over 400. In 1976, the number of colleges and universities estimated to offer special education programs exceeded 600. The rapid increase in college programs in the 1950's and 1960's reflected the new participation of the federal government in the financial support of special education training programs. In addition to special teachers, school systems needed growing numbers of administrators and supervisors for the rapidly proliferating programs in special education and, beginning about 1965, many new positions were created in connection with programs for gifted pupils.

Although it is impossible to determine all the influences that brought about the rapid development of public school programs for exceptional children in the period beginning about 1945, three can be recognized.

First, as the nation became aware of and made necessary provisions for the rehabilitiation of World War II and Korean War veterans who had been seriously injured, facilities in veterans' hospitals were enlarged and new training and research programs were established in various institutions and agencies. Departments of clinical psychology, speech pathology, and physical medicine in colleges and universities were expanded through federal rehabilitation

Care for veterans created service models and favorable attitudes.

funds, and the influences of their investigations on behalf of veterans spread to research and training for exceptional children. For example, because blinded veterans rejected isolation and dependency as their fate, veterans' hospitals organized programs for mobility and occupational training. Leaders of these programs soon became active in preparing teachers in mobility and orientation techniques for blind children. Many more school systems discovered that blind children could function in integrated day school programs based on a resource teacher model, that is, programs in which the children spent only part of the day outside regular classrooms. These programs forced serious examination of past practices of automatically referring all blind children to special schools or classes.

Parent advocacy emerged in the postwar period.

Second, parents of exceptional children formed a number of organizations, such as the National Association for Retarded Citizens (known earlier as the National Association for Retarded Children), which was chartered in 1950. Through such groups parents became socially and politically active and were able to influence state legislatures and the Congress. In response, the federal government entered the field of special education in various ways. For example, in 1957, supports were provided for research and leadership training in the area of mental retardation. In 1963, these supports were extended by Congress to cover almost all exceptionalities except giftedness. In 1966, a new Bureau of Education for the Handicapped (BEH) was established to administer the burgeoning new programs. In fiscal year 1976, BEH distributed more than $200 million to state departments of education, colleges, and local school systems for a broad spectrum of programs. Under legislation passed in 1975 (Public Law 94–142), the federal role was considerably expanded. All these developments were stimulated mainly by parent advocacy groups.

States provided most of the money.

Third, many state legislatures passed legislation requiring instruction for exceptional children and distributed "excess cost" aids to local school districts that launched the necessary special education programs. Excess cost aids were special categories of funding designed to ensure that local districts would not experience special financial burdens when they provided specialized programs for students with special needs. Presumably, excess cost aids enable local districts to conduct programs for handicapped children without straining their budgets or rejecting special programs just because of their cost. Given financial assistance from state legislatures and, later, from federal agencies, many school districts operated special education programs. They found that the provision of services for exceptional children also helped to improve services for the school population as a whole. Funding of local programs also helped to lay the groundwork for decreasing dependence upon residential schools and hospitals.

The quantitative leap in programming for exceptional children between 1945 and 1970 cannot be attributed to any great technological or ideological advance. There were some innovations, such as the development of low-vision devices, individual electronic hearing aids, and techniques for the rapid production of enlarged print books, but they were of limited account in the context of the massive change. On the whole, the period can be said to have been one of rapid development based on the simple models of the past. Teachers who had graduated from training programs in the 1950's and 1960's were prepared for the most part to function in the "special classes and schools" characteristic of the familiar model of earlier decades.

"Normalization" became a policy of the 1960's and beyond.

Nevertheless, this 25 year period was not totally barren of new ideas; in fact, some of the trends discussed in the next section were generated during these important years. During the 1960's, many special educators in the United States investigated developments in the education of exceptional persons in other parts of the world. Visitors to Scandinavian countries encountered the process of *normalization,* that is, the principle of educating handicapped persons in and for the "normal" environment of the nonhandicapped. Attitudes toward normalization in Denmark were noted by Jorgensen (1978):

> During the '60's, the primary and lower secondary school . . . gained the experience that handicapped children—all other things being equal—develop better socially and educationally together with an ordinary cross-section of the same age group than when separated into a handicap environment. It was also observed that, in step with increasing integration and openness concerning the problems of the handicapped, they were increasingly accepted into normal institutions in society and places of work. (p. 2)

The boundary lines defining exceptional categories also began to be scrutinized. Strong pressures developed to extend special education services to children who obviously were very much in need of specialized forms of education but were as yet unserved. The case argued most strenuously in the 1950's was whether schools should serve trainable as well as educable retarded children and youth. A famous debate took place between I. Ignacy Goldberg and William M. Cruickshank who were, respectively, "for" and "against" including "trainable" children in local school programs (Goldberg & Cruickshank, 1958). Recent judicial and legislative mandates specifying the school's responsibilities for all handicapped children have made this debate of historical interest only. The issue of whether or not gifted and talented pupils actually needed special education was also much in contention during the 1950's.

The number of special education categories grew during the 1960's and 1970's.

The decade of the 1960's saw special education categories increased to include children who were not included in the common special education classifications. In the late 1960's, the largest increases in special education enrollment were in the area of learning disabilities. Many observers even now do not consider it a category in the usual sense but, rather, a diverse set of residuals from other categories. Nevertheless, the inclusion of learning disabilities in special education's province was welcomed by many persons because it permitted the extension of service to neglected children, even if the definitional problems proved to be a major professional embarrassment.

Overall, one characteristic of the postwar period may be of the greatest importance for the future: For the first time, diverse programs of special education were consolidated in single schools, making it possible to work across all categories and to consider how they might be related to each other.

Consolidation in the schools began to be reflected in the research and training programs of many colleges and universities. However, many difficulties with the "category" problem remain to be solved.

Doubts began to emerge about the effectiveness of special education programming.

In the busy period of the 1960's, longstanding patterns of special education began to draw their share of skepticism, criticism, and even hostility. Although school districts received more funds, they seldom made serious evaluations of their programs. When evaluation studies were undertaken (e.g., the 1960 series of mental retardation special class "efficacy" studies), the methodology was usually at least as doubtful as the practices purported to be evaluated.

Skepticism was expressed by some very influential special educators, such as Dunn (1968), as well as by persons outside of the professional ranks. For example, the following comments were offered to a group of special education administrators in 1970 by Albert Quie, then a U.S. Congressman and later a governor of the State of Minnesota:

> One of the great problems of being in political office these days is that there is very little that is sacred. One was generally always safe being for motherhood, the flag, apple pie, and handicapped children. But today, with the women's liberation movement and the pill, motherhood is being challenged, the flag seems to be continually getting into trouble, apple pie is being tested by the Food and Drug Administration, and I am afraid that handicapped children might not be too far behind. If the public is going to significantly invest in the education of the exceptional child . . . [it is necessary] to establish clear objectives for the programs, to explain to the public what its dollars will buy, and to demonstrate that the objectives have been achieved. (Quie, 1970)

The 1970's: Negotiating for More Inclusive Arrangements

Renegotiations for more inclusive arrangements increased in the 1970's.

Fundamental changes in the organization of schooling have been in process since the early 1970's, when a serious renegotiation of boundaries between regular and special education and between community-based and residential institutions began. Perhaps the period can be summarized under the rubrics *least restrictive alternative, mainstreaming,* or, in its broadest sense, *progressive inclusion* or *integration.*

"Whereas 50 years ago schools deliberately weeded out certain kinds of students as they progressed up the academic ladder, schools today are expected to provide all students with equal opportunities to gain as much schooling as possible—to go out of their way to help every child achieve his or her potential, and perhaps a little more.

School administrators, once advocates for a system, must now become advocates for children and youth." (American Association of School Administrators, 1979, p. 9)

The Movement Toward Mainstream Education

In sum, the history of education for exceptional children can be told in terms of one steady trend—progressive inclusion. Exceptional children have come, in a period of less than two centuries, from substantial neglect, first into isolated residential schools (for just a few), then into isolated community settings (mostly in the form of special classes), and now into more integrated arrangements. In the 1970's and 1980's, we began what undoubtedly will be recorded by future historians as a remarkable reversal of the negative attitudes that relegated these children to isolated classes, hospitals, and residential centers. The agendas of local boards in communities all across the country began to reflect the influx of children with complex and severe educational problems, and almost every principal and teacher in every school district faced difficult challenges concerning the accommodation of more exceptional children in regular classrooms.

The philosophy of accommodation grows.

Heinz (1971) summarized the trend as follows:

> From an historical perspective, special education may be viewed as developing through three successive stages: (1) treatment through the segregation and restriction of resources for survival appropriate for people called different; (2) caring for people regarded as different by providing resources required for their physical existence; and (3) instructing such people so that they may be incorporated into existing, dominant social systems. (p. 9)

The movement of special education toward mainstream education is found in other countries, too. Witness this statement about special education in Sweden (Lundstrom, 1974):[6]

> Stress has been laid during the last decade on efforts to integrate handicapped pupils as far as possible into ordinary education.
>
> At one time the characteristics of special education could be summed up as individualized teaching methods, specially constructed programs, step-by-step learning, a psychological approach to the child's problems and difficulties, mental hygiene as an aspect of the methods and treatment adopted by teachers, and so on. On the whole, the emphasis was not only on the pedagogic aims of education, as evaluated in terms of knowledge, skill, achievement, but also on the social and emotional development of the child. All these criteria, however, have now been incorporated in modern education and it is therefore no longer reasonable to regard special education as fundamentally different from general education. Throughout the world the general school systems seem to have changed their characteristics. In Sweden, the modern school aims at a method of work whereby each student can obtain exactly what he requires in respect [to] teaching, upbringing and care. The aim is to offer each individual student a course of study that suits his particular aptitudes and needs and gives him an opportunity to perform according to his ability.
>
> The aim . . . is also valid for special teaching. It implies the creation of better opportunities in the school system as a whole for children and young people with

Mainstream education is a worldwide movement.

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[6] Extract from *Case Studies in Special Education: Cuba, Japan, Kenya and Sweden,* © Unesco, 1974. Reproduced by permission of Unesco.

> some sort of special difficulty or handicap. Special education in Sweden nowadays can thus be described as an essential part of general education, as one of the elements designed to make it possible for all pupils, including the handicapped, to benefit by access to learning or training. At the same time, special education requires a greater degree of specialist contributions, coordinated with the pedagogic work in "ordinary" education. Medical, technical, social and psychological experts are needed, as are specially trained teachers and specially devised teaching aids combined with ordinary materials. Hence, it is still correct to talk of special education as a reality in the sense that it involves concentrated educational efforts for the individual handicapped pupil. (pp. 119–120)

In Indonesia, recent approaches to rehabilitation stress the goal of integration. The quality of mainstreaming is measured not merely in terms of frequency of the disabled person's contacts "outside the primary group," but also in terms of "actively creating such contacts . . . rather than passively accepting them" (Semiawan, 1980, p. 1). And in mainland China, attitudes and approaches are moving in a similar direction:

> China's programme for the care of the disabled stresses one basic point: integration. . . . Those disabled people who can work are encouraged to take jobs in a normal environment. It is the same for the children: schooling where possible with physically sound children, and if the other pupils have to shoulder the job of settling them in, so much the better. (Yi Shui, 1981)

The changes appear to be permanent.

Historical and international perspectives suggest that the current mainstreaming trend is not a minor pendulum swing or a temporary enthusiasm. From the beginning, a steady inclusive trend in special education has moved from unconcern to distal (far away) to proximal (near) arrangements for handicapped persons. It would be naive to assume a straight-line, uncomplicated, and continuing progression. Nevertheless, fundamental forces appear to be at work supporting the general trend toward mainstreaming. Administrative arrangements are increasingly regarded as dependent variables that can be modified to meet individual needs rather than as certitudes for the disposition of children "carved by nature" to fit particular slots.

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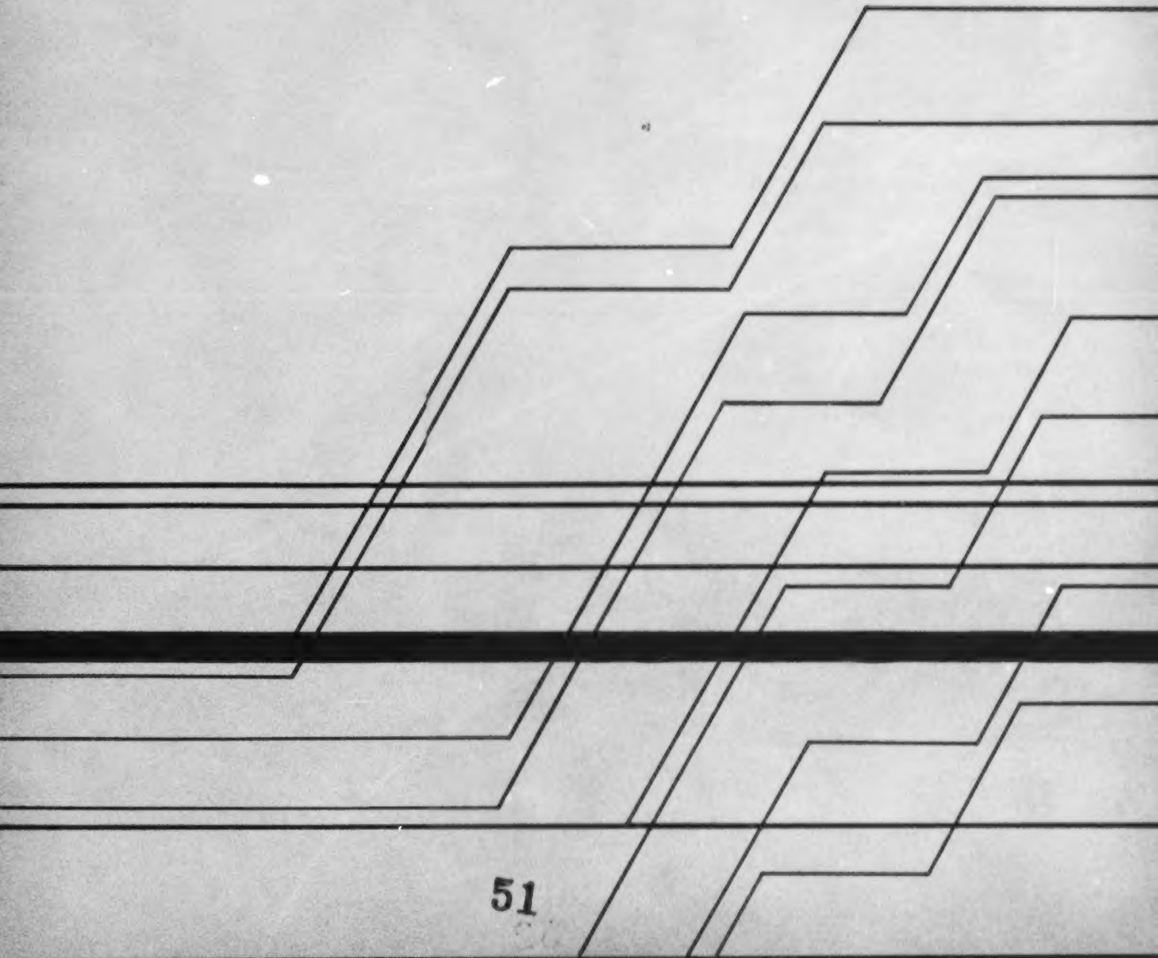
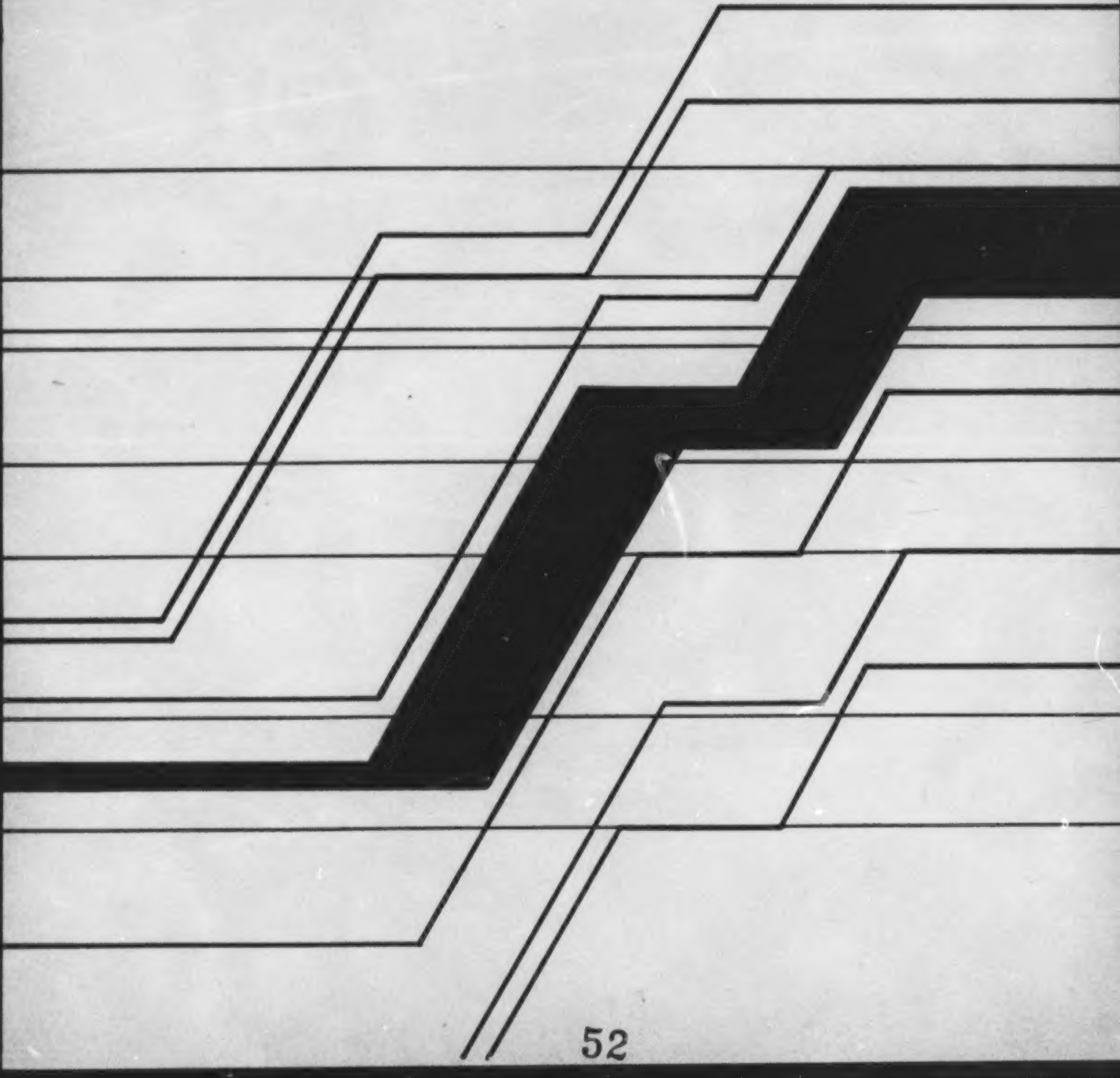


CHAPTER 2

Socio-Legal and Organizational Foundations



Chapter Outline

- Legal Mandates
  - Educational Applications of Legal Concepts
  - Public Law 94–142
  - The Rehabilitation Act of 1973
- Organization for Instruction
  - The Cascade Model
  - A New Perspective
  - Returning or Never Leaving
  - Consulting Processes: From Dyadic to Triadic Relationships
- Mainstreaming in the Community
- Conclusions
- Prevailing Versus Preferred Practices
- Topical Bibliography

Legal Mandates

Every state has important legal provisions for the education of exceptional students, but since the early 1970's the federal courts and the U.S. Congress have been dominating influences. In the famous *Brown* v. *Board of Eduation* case of 1954 the Supreme Court ruled that the separation of schooling provisions by race was inherently unequal and, thus, did not meet the test of equal protection under the Fourteenth Amendment to the U.S. Constitution. Some observers in 1953 anticipated that the same reasoning would be applied to handicapped persons, and it was, in the 1971 case of *PARC* v. *Commonwealth of Pennsylvania.*

Every state has laws governing education for exceptional students.

The *PARC* case was not fully litigated; rather, it was settled by the federal court in an approved consent agreement which provided:

> It is the Commonwealth's obligation to place each mentally retarded child in a free, public program of education and training appropriate to the child's capacity, within the context of the general educational policy that, among the alternative programs of education and training required by statute to be available, placement in a regular public school class is preferable to placement in a special public school class and placement in a special public school class is preferable to placement in any other type of education and training. (PARC v. Pennsylvania, 334 F. Supp. 1257, 1971)

The *PARC* case also established the right of parents to participate in major decisions affecting their children and in the observance of due process. The State Secretary of Education in Pennsylvania was directed to train hearing officers to conduct hearings for parents and school representatives whenever there were disagreements over such matters as school placement.

The *PARC* case was directed only to mentally retarded children, but was soon extended to all handicapped children in the case of *Mills* v. *D. C. Board of Education* (1972). In *Wyatt* v. *Stickney* (1972) the court ordered that when public agencies, including the schools, make special interventions in the lives of individuals they must do so in the least intrusive or least restrictive manner. This is the case for the *least restrictive alternative* which, in effect, says that schools should deliver special education to a student when it is needed while the child remains in his natural environment (with his own family) and in regular classes and schools whenever feasible.

Judicial proceedings were extended to cover all handicapped children.

Educational Applications of Legal Concepts

The applications of the concepts of *due process* and *least restrictive alternative* are quite new to education and deserve close scrutiny. Leaders of The Council for Exceptional Children offered the following interpretation:

> Effectively complying with due process requirements contributes to the designing of educational programs to meet the individual needs of each child. Determination of both the child's needs and the appropriate program is the purpose of due process. The process, however, is also designed to insure that handicapped children receive their education in the least restrictive setting. Such a concept

> assumes that there are a variety of alternative settings in which the child can be placed. These settings range from the usual or regular classroom with nonhandicapped peers to more restrictive settings such as special classes on a full or part time basis, special schools, or residential institutions, which are the most restrictive.

In legal terms, removal restricts liberty.

> The concept is frequently referred to as mainstreaming. From a legal view, the concept means that any removal of an individual from a normal situation into one which is restrictive, as a matter of public policy, is a limitation of that individual's liberty. Thus, placement in a special class as opposed to a regular class deprives the individual of some liberty, and is restrictive. . . .
>
> In light of the judicial mandates and those which are based in statutes, adherence to due process in placement decisions means that for each child, regardless of the severity of his handicap, the schools must propose a placement in the most normal setting possible. Further, within the due process context, the schools must be prepared to accept the responsibility for demonstrating the appropriateness of their recommendation not only as the best setting for the educational service but also as the least restrictive. This same obligation occurs each time a change is proposed in the child's educational program. Further, it has been recommended that a hearing officer's decision to approve a proposed education plan "shall indicate why less restrictive placement alternatives could not adequately and appropriately serve the child's educational needs." (Abeson, 1976, pp. 23–24)

Another interpretation of the concept is provided in the regulations of the U.S. Office of Civil Rights drafted to implement the amendments to the Rehabilitation Act of 1973. (The term *recipients* is used to refer to any educational agency that receives federal funds in any form.)

> 74.35 Most normal setting feasible.

Education must be provided in the "most normal setting feasible."

> A recipient shall provide educational services to each qualified handicapped person who resides in the recipient's jurisdiction, regardless of the nature or severity of the person's handicap, in the most normal setting feasible and may not remove a handicapped person from, or place such a person in a setting other than, the regular educational environment except when the nature or severity of the person's handicap is such that education in regular classes with the use of supplementary aids and services is demonstrated by the recipient not to be in the best interest of such person. *[U.S. Federal Register, 41* (96), 1976]

Although the preceding discussions refer specifically to handicapped pupils, the same concept often applies to gifted pupils. In Pennsylvania, for example, state law mandated the application of the least restrictive alternative principle to gifted children, effective in September 1977.

Public Law 94–142

In 1975, the U. S. Congress passed Public Law 94–142, also known as the Education for All Handicapped Children Act of 1975. It brought together many of the judicial principles—right to education, least restrictive alternative, individualized programming, and due process—that had emerged from legal proceedings so rapidly in the early 1970's. This Act proposed a substan-

Compensatory Education

The State of Maryland has a law that provides that handicapped children who are residents of the State and have not had at least five years of education will be compensated by being provided with an additional two years of education beyond the age of 21. (Amicus, 1980)

tial escalation of federal funding for special education programs beginning in 1977. To qualify for funding, states were required to comply with a broad new set of standards related to assessment and planning for individual children and the involvement of parents in planning and other procedures. The general purpose of the Act was specifically stated as follows:

P. L. 94–142 promised increased federal funding.

> It is the purpose of this Act to assure that all handicapped children have available to them . . . a free appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that the rights of handicapped children and their parents and guardians are protected, to assist States and localities to provide for the education of all handicapped children, and to assess and assure the effectiveness of efforts to educate handicapped children. (Sec. 3[c])

Public Law 94–142 is a detailed and comprehensive blueprint for special education programs of virtually all kinds at state and local levels. It is regarded by some educators and political leaders as intrusive in state and local school operations, especially because education in the United States is legally a state and not a national responsibility. The Congress authorized substantial funding to support special education programs as part of the Act, but actual appropriations fell far short of promises, at least up to 1981.

Federal funding levels have fallen below promises.

In 1981, special education programs suffered an average of 9% recision in funding by the U. S. Congress, but this was less than the 25% recommended by the Administration and considered by the Congress. Some observers felt that this limited cut and the saving of Public Law 94–142 as a whole from repeal was a major achievement in a period of widespread recisions and "blocking" of social and educational programs; however, the future of this legislation is uncertain.

Despite the many criticisms of P.L. 94–142,[1] the Act affirms several principles that, taken together, make it one of the most significant pieces of educational legislation in the history of the United States. These principles are as follows:

- All handicapped children (ages 3–21) have the right to a free and appropriate public education. There can be no financial charges to the family and the program provided must uniquely meet the needs of the individual.

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[1] Details of statutes are found in the regulations issued by the particular department of government responsible for implementation. In the case of P.L. 94–142, see the *Federal Register,* August 23, 1977, pp. 42474–42514, CFR Title 45, Sec. 121a. For details on individualized planning, see also *Federal Register,* January 19, 1981, pp. 5460–5475, CFR Part 300.

- Evaluations of each handicapped child must be nondiscriminatory. This means, for example, that testing must be done in each child's native language, that the tests must be valid for their intended purposes, and that a team of knowledgeable persons must always be involved in the assessments.
- A written individualized education program (IEP) must be prepared and revised periodically for each child.
- The program must be conducted in the least restrictive environment, which also must meet the "appropriateness" test.
- Decisions must follow due process procedures, including the right of parental participation with full access to all information about the child, right to counsel, and right to hearings and appeal procedures if there is disagreement on plans.

The Rehabilitation Act of 1973

New directives apply to employment and other areas of life besides education.

A related piece of federal legislation is the Rehabilitation Act enacted by Congress and signed in 1973. Recent amendments to the Act explicitly exclude the use of handicapping conditions as a basis for negative decisions in schooling, employment, and the broad activities of society. Section 504 of the Rehabilitation Act of 1973 reads, in part, as follows:

> No otherwise qualified handicapped individual in the United States ... shall solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. (29 U.S.C. 794)

Individualized Plans for All Children

"Individualized education plans [sic], *now reserved for handicapped children, could be the answer for all elementary and secondary students in the 1980s.*

"'Why shouldn't normal kids have an IEP?' asked K. Forbis Jordan, senior specialist in education for the Congressional Research Service. 'There is nothing unique about an IEP that should make this a privilege provided only for handicapped youth,' he told the American Association of School Administrators convention.

"In a separate speech before AASA, John Ellis, U.S. executive deputy commissioner for education programs, suggested the individualized movement will reach 'full bloom' in the 1980s. 'All students, whether slow, brilliant, handicapped, minority or average, will have a program that is tailor made.'

"Jordan further suggested that developing IEPs for all children would be a 'creative' move for local school districts to make, rather than waiting for the federal bureaucracy or the courts to impose the plans.

'Someday,' he mused, 'maybe someone will sue for the normal kid' to have an individualized education plan." (Northeast Ohio Special Education Regional Resource Center, 1980.)

Section 504 uses the term *handicap* to include such diseases or conditions as speech, hearing, visual and orthopedic impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, diabetes, heart disease, mental retardation, emotional illness, and specific learning disabilities such as perceptual handicaps, dyslexia, minimal brain dysfunction, and developmental aphasia. In accordance with a formal opinion of the Attorney General of the United States, alcohol and drug addicts are also considered handicapped individuals (Office of Civil Rights, 1978).

Thomas Gilhool, attorney for the plaintiffs in the *PARC* case, commented on the "integration imperative" of P.L. 94–142 and Section 504 of the Rehabilitation Act:

Legislation pointed to integration.

> The integration imperative is thus crucial to all of the purposes of the Acts—to achieving effective education for handicapped children, and to preparing handicapped children and nonhandicapped children alike, for life in a world which includes disabled people. It is not consistent with the Congress' intentions, with its findings of fact or with the judgments of the Congress clear in the words of the enactments and express from the legislative history, to maintain segregated, handicapped-only institutions.
>
> There is no cognizable reason under the statutes—that is, no *learning* reason and no *disability* reason—for handicapped-only centers, certainly not on the scale that they now exist. If a child can come to school at all, even to a self-contained class in a handicapped-only center, he can come to a self-contained class in a normal school. (Gilhool & Stutman, 1978, p. 215)

Organization for Instruction

Organizational arrangements for special education in most schools well into the 1960's and even into the 1970's could have been described in terms of the "two-box" theory. According to this theory, local school buildings harbored two kinds of classes (regular and special), two types of children (regular education children and special education children), and two sets of teachers (regular education and special education). In effect, two separate school systems were operated, each with its own pupils, teachers, supervisory staff, and funding system.

A child who showed difficulty in a regular class was referred by the teacher to a psychologist and/or other specialist for study. If the child met the standards for some category of special education (usually defined by state regulations that specify the conditions for special categorical funding), he or she was enrolled in a special class or special school. Too often, the referral information and psychological testing were the sole basis for the decision.

The two-box approach declined.

It was not unusual for a large elementary school operating under the two-box theory to contain perhaps 24 regular "boxes" or classes and 4 or 5 special "boxes" for educable mentally retarded children, learning disabled children, remedial reading cases, and Title I children.[2] Speech-language clinicians, hearing teachers, and other itinerant specialists might have been in and out of the building for part-time services to some students who, thus, became part-time residents of "special boxes."

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[2] Title I programs are offered in schools whose enrollment is made up of many low-income families and whose children need supplementary help in basic subjects.

Specialized training was typical.

Special education teachers in such schools generally received their training in the special education departments of teacher training institutions and held specialized certificates from state departments of education for their particular categories of competency. On the average, going into the 1970's, states typically offered seven or eight different kinds of special education teacher certification. Among the more common areas of specialization were educable mentally retarded (EMR), trainable mentally retarded (TMR), speech and hearing (S&H), learning disabilities (LD), hearing impairments (HI), visual impairments (VI), crippled and other health impaired (COH), and emotionally disturbed (ED). Of course, there were many variants among the categories. Depending on the state, it was possible for a teacher to be certified to teach in such additional categories as hard of hearing, partially sighted, brain damaged, perceptually impaired, gifted, and others.

To complete the brief story of the two-box organization, one must add that most of its development occurred in elementary schools. In secondary and postsecondary schools, exceptional students usually were left to sink or swim without special supports. The sad fact at these higher levels is that there was more sinking than swimming.

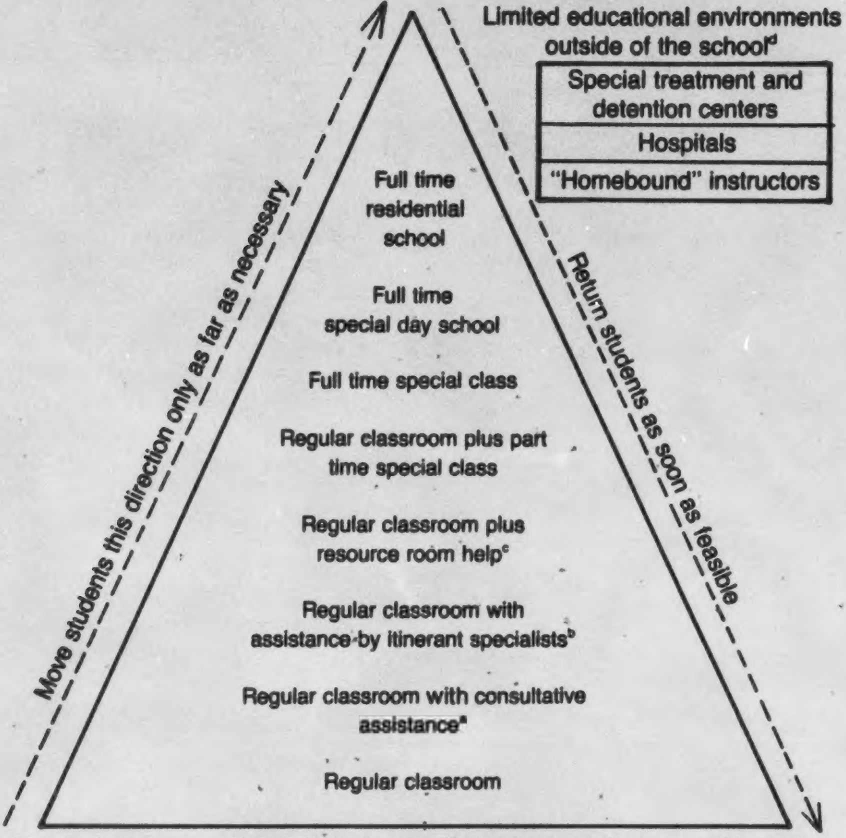
The Cascade Model

The cascade system emerged in the 1960's.

In the 1960's, there emerged a more complex form of organization of special education programs. Unlike the two-box system, it has been described as a cascade or continuum of instructional arrangements (Figure 2–1). Regular classes formed the broad base to represent the fact that many exceptional children were enrolled in this setting and were either unrecognized or served by unassisted regular teachers. At other levels in the cascade, specialists provided different degrees of educational interventions (see footnotes to Figure 2–1). Some distinctly favorable features of the model included the following:

1. It proposed that support be given in regular classes as one means of meeting the special needs of children who are maintained there.
2. It proposed that children *not* be classified and given special placements on a permanent basis but, rather, that they be moved to special stations only for as long as necessary and that they be returned to regular classes as soon as feasible. Thus, no indelible labels were attached to students. The total number of children served over time in special settings greatly exceeded the numbers served at any given time.
3. It proposed that the boundary lines between special education and regular education be renegotiated and opened so that students could pass back and forth easily, as dictated by their educational needs.
4. It proposed that regular and special education staff members become more interactive or collaborative in their daily work, such as sharing re-

FIGURE 2–1
The Original Special Education Cascade


Limited educational environments outside of the school[d]
Special treatment and detention centers
Hospitals
"Homebound" instructors
Full time residential school
Full time special day school
Full time special class
Regular classroom plus part time special class
Regular classroom plus resource room help[c]
Regular classroom with assistance by itinerant specialists[b]
Regular classroom with consultative assistance[a]
Regular classroom
Move students this direction only as far as necessary
Return students as soon as feasible

[a] Consultative assistance might be offered, for example, by school psychologists, consulting teachers, resource room teachers, supervisors or others. The term *consultative* denotes only *indirect* services and no *direct* service or instruction to the child by the consultant.

[b] Itinerant specialists commonly include speech and hearing therapists and mobility instructors for the blind, for example. They offer some *direct* instruction to the students involved.

[c] A resource classroom is a special station in a school building that is manned by a resource teacher who usually offers some direct instruction to selected students but also usually offers consulting services to regular teachers. Sometimes resource teachers are categorical (such as resource teacher for the blind) but increasingly resource teachers are employed for a more generic, noncategorical role.

[d] This special set of environments is included here in set-aside fashion because usually students are placed in these settings for reasons other than educational. For example, they go to detention centers on court orders for reason of conviction for some criminal offense; or they go to hospitals or are held at home because of health problems. Special educators often work in these *limited* environments and some degree of specialization in education is required. But, in the main, there is strong preference, from an educational point of view, for return of the students to regular school environments as soon as feasible.

Regular classroom placement was preferred.

sponsibilities for students, rather than remain isolated in their separate centers and classrooms.

5. It proposed that extraordinary justification be required to remove a student from the regular school environment, especially when removal was from both home and school environments to a residential center.

An example of how regular and special education staff members collaborate in a cascade framework is provided by the public schools in St. Paul, Minnesota (see Figure 2–2). Seven types of service are provided, ranging from "observation, assessment, and monitoring" followup of students in regular classes up to "residential placement with in-house school programs (out of district)." Each school in the district has a student support team that manages the study and planning for all exceptional children in the building.

Figure 2–2 outlines the responsibilities of the student support teams, regular educators, and special educators at each level of the cascade. For example, at the first level, where the decision is to retain the student fulltime in a regular program, with followup consisting only of observation, assessment, and monitoring, the support team takes on a considerable responsibility, including the assignment of a staff member for monitoring duties, to review and follow the student. Special educators actually may perform assessments as part of the monitoring program. In contrast, for a student placed at the third level ("primary placement in regular education program"), direct instruction is provided by both regular and special educators. Consultative help is made available to regular teachers as necessary. Note that even in the case of students placed out of district in residential schools with 24 hour programs, the local special education staff carries a heavy responsibility for planning the student's educational program.

Models of the past gave attention mainly to the "place" where instruction is given.

The cascade model was criticized for overemphasizing the "places" at which special education could be provided. This criticism led a number of educators to question their justification. What if deaf pupils could be given the specialized instruction they need in the regular school environment? Or, what if detailed diagnostic procedures could be coordinated through teaming arrangements within the regular school setting, thus reducing sharply the use of referral and special placement procedures for children who are not progressing in academics or who exhibit behavior problems? In fact, precisely these kinds of developments began to occur in the 1970's. Educators were learning to provide specialized instruction outside of specialized places.

The changes involved more than moving children down the cascade. It was also necessary for specialized staff members and functions to move toward the mainstream, according to the scheme presented in Figure 2–3. Hence, diagnostic and specialized instructional procedures began moving down to the regular class base of the cascade. There was growing recognition that not all specialized instruction needs a special place and, in fact, that it is likely to be disadvantageous to confine children in special places or limited environments for long periods of time. Equally important, only when there has been genuine enrichment of mainstream settings (see Figure 2–3) can the instruction of large numbers of exceptional children there be justified.

FIGURE 2–2
Responsibilities of Student Support Teams, Regular Educators, and Special Educators in a Cascade Operation

Type of Service	Level(s) of Support	Student Program	Student Support Team Responsibilities	Regular Education Responsibilities	Special Education Responsibilities
Observation Assessment	1	Full-time regular program	1. Upon request from teacher, parent, etc., ensure that staff are assigned to observe and assess student's strengths and needs. 2. Review assessment and observation data. 3. Assign a staff member to monitor student for one year after termination of service in order to determine if: a) IEP should be terminated; or b) direct special education service should again be considered.	1. Provide an appropriate total program to student. 2. Refer the student for assessment or monitoring when appropriate.	Assessment and/or monitoring as assigned by the student support team.
Indirect services only	2	Full-time regular program adapted to meet IEP goals and objectives	1. Review student needs and strengths. 2. Develop, implement, and review IEP. 3. Determine if and when level of service should be decreased (to level 1) or increased (to level 3).	1. Adapt student program to meet needs stated in IEP. 2. Obtain special education support as needed.	1. Participate in development of IEP. 2. Consultative service to teacher(s) is an assigned responsibility of appropriate special education teacher. 3. Special education staff may be assigned to case manage student. 4. Student will be charged to caseload of appropriate special education teacher.

FIGURE 2–2 (Continued)

Type of Service	Level(s) of Support	Student Program	Student Support Team Responsibilities	Regular Education Responsibilities	Special Education Responsibilities
Primary placement in regular education program	3	Student primarily in regular program with special education direct and indirect services as stated in the IEP.	1. Review student needs and strengths. 2. Develop IEP. 3. Evaluate student progress. 4. Provide for continuity from year to year.	1. The student has the right and opportunity to any appropriate regular education program. 2. Adapt regular class instruction as appropriate to meet the student's individual needs in the least restrictive environment.	1. Provide special education instruction as delineated in IEP. 2. Provide indirect service to special education student in regular classes through consultation and assistance to regular classroom teachers as appropriate. 3. Continually update assessment of student's strengths and needs.
Primary placement in special education program	4	Student in special education program with integration into regular program as appropriate.	1. Review student needs and strengths. 2. Develop IEP. 3. Evaluate student progress. 4. Provide for continuity from year to year.	1. The student has the right and opportunity to any appropriate regular education program. 2. Adapt regular class instruction as appropriate for student.	1. Primary responsibility for planning and implementing IEP. 2. Provide special education instruction as delineated in IEP. 3. Provide indirect service to special education student in regular classes through consultation and assistance to regular class teachers. 4. Request additional regular education service as appropriate.

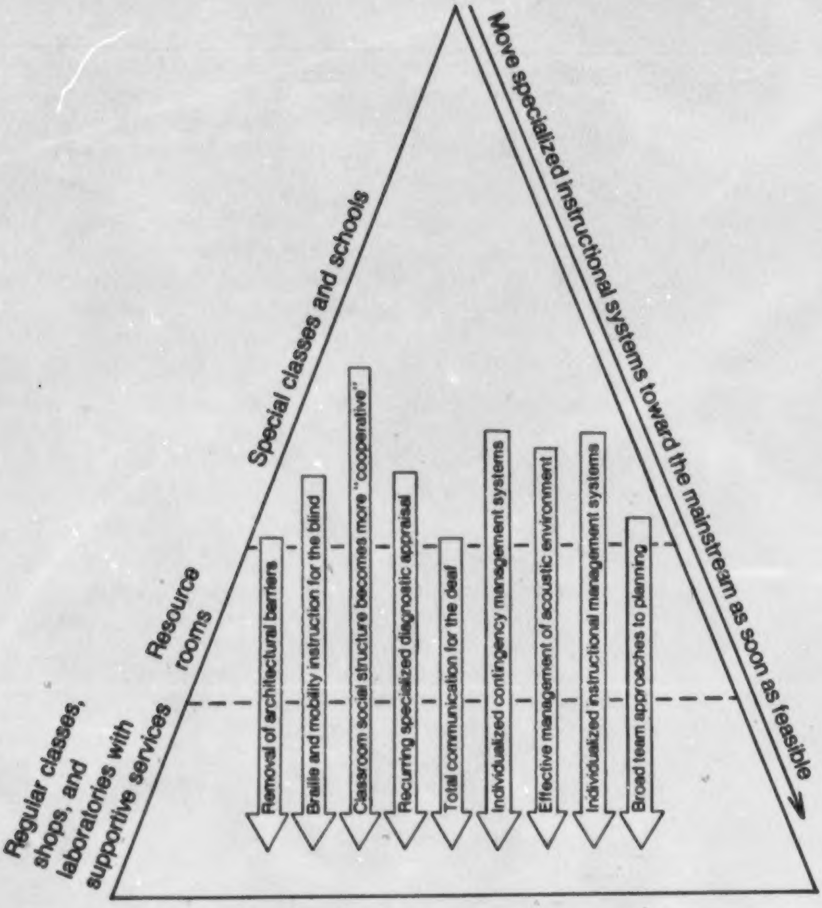
Full-time placement in special education setting	5	Student in special education with no integration into regular education.	1. Determine appropriateness of referral to this more restrictive option based on student's need. 2. Develop and implement interim plan. 3. Be represented at review conferences when appropriate. 4. Develop IEP for return of student from intensive program to special education program in home school.	1. Provide appropriate regular education instruction when integrated into home school.	1. Primary responsibility for planning and implementing IEP. 2. Provide special education instruction as delineated in IEP. 3. Provide continuous assessment of student progress. 4. Provide continuity from year to year.
Residential placement with inhouse school program (in district)	6 (a)	Twenty - four - hour program, including social, emotional, physical, and educational curriculum	1. Determine appropriateness of referral to this more restrictive option based on student's needs (request service through district wide child study process and/or community agencies) 2. Develop and implement interim plan. 3. Be represented at review conferences when appropriate, and outtake conferences. 4. Develop IEP for return of student from intensive program to special education program in home school.	1. Provide appropriate regular education instruction when returned to home school.	1. Primary responsibility for planning and implementing IEP in conjunction with residential treatment staff. 2. Provide special education instruction as delineated in IEP. 3. Provide continuous assessment of student progress. 4. Provide continuity from year to year.

FIGURE 2–2 (Continued)

Type of Service	Level(s) of Support	Student Program	Student Support Team Responsibilities	Regular Education Responsibilities	Special Education Responsibilities
Residential placement with inhouse school program (out of district)	6 (b)	Twenty-four-hour program including social, emotional, physical and educational curriculum	1. All referrals and recommendations for placement must be forwarded to the Director of Special Education.	1. Provide appropriate regular education instruction when returned to home school.	1. Primary responsibility for planning and implementing IEP in conjunction with residential treatment staff. 2. Attend staffings and/or obtain reports to review student progress. 3. Make every effort to provide education in the least restrictive environment.

Footnote: St. Paul Public Schools plan of operations. Included here by courtesy of Charles Hagen, Director of Special Education.

FIGURE 2–3
Changes Occurring in the Cascade*


Special classes and schools
Resource rooms
Regular classes, shops, and laboratories with supportive services
Move specialized instructional systems toward the mainstream as soon as feasible
Removal of architectural barriers
Braille and mobility instruction for the blind
Classroom social structure becomes more "cooperative"
Recurring specialized diagnostic appraisal
Total communication for the deaf
Individualized contingency management systems
Effective management of acoustic environment
Individualized instructional management systems
Broad team approaches to planning

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*Note the trend toward fewer specialized places and more diverse "regular" places.

Specialists tend to design environments that only specialists can manage. Thus, specialized teachers of hearing impaired children, for example, often design educational programs that require extraordinary controls of the acoustic environment, intricate arrangements of amplification equipment, and a very heavy focus on the language development problems of hearing impaired children. Such specialized places may offer opportunities for intensive and specific instruction but they tend to be *limiting* in several other respects.

Specialized places are limited places.

1. Specialized places offer limited curricula. It is unlikely, for example, that special classes and schools which are created for a limited category of children can develop broad programs in vocational or even academic areas. The rich offerings of regular schools need to be as widely accessible as possible to all children.
2. Specialized places that enroll only a limited category of students restrict the models of behavior available for emulation, opportunities for friendships, and opportunities for the awareness and appreciation of diversity, both for the students within that category and their nonexceptional classmates.
3. Systems that emphasize narrow categorical placements of students in specialized environments lead to oversimplified public dialogue and social policy. Categories of children become rigidified and the categorical group characterization becomes stereotyped, which leads, in general, to poor quality planning and programming. Nonhandicapped students lack experience with exceptional students and, thus, lack all background for knowledgeable participation in related policy development.
4. Sometimes, of course, specialized places totally fail to provide the intensive or specialized education they are intended to offer, and the results are only watered-down curriculum and lowered expectations or worse.

A New Perspective

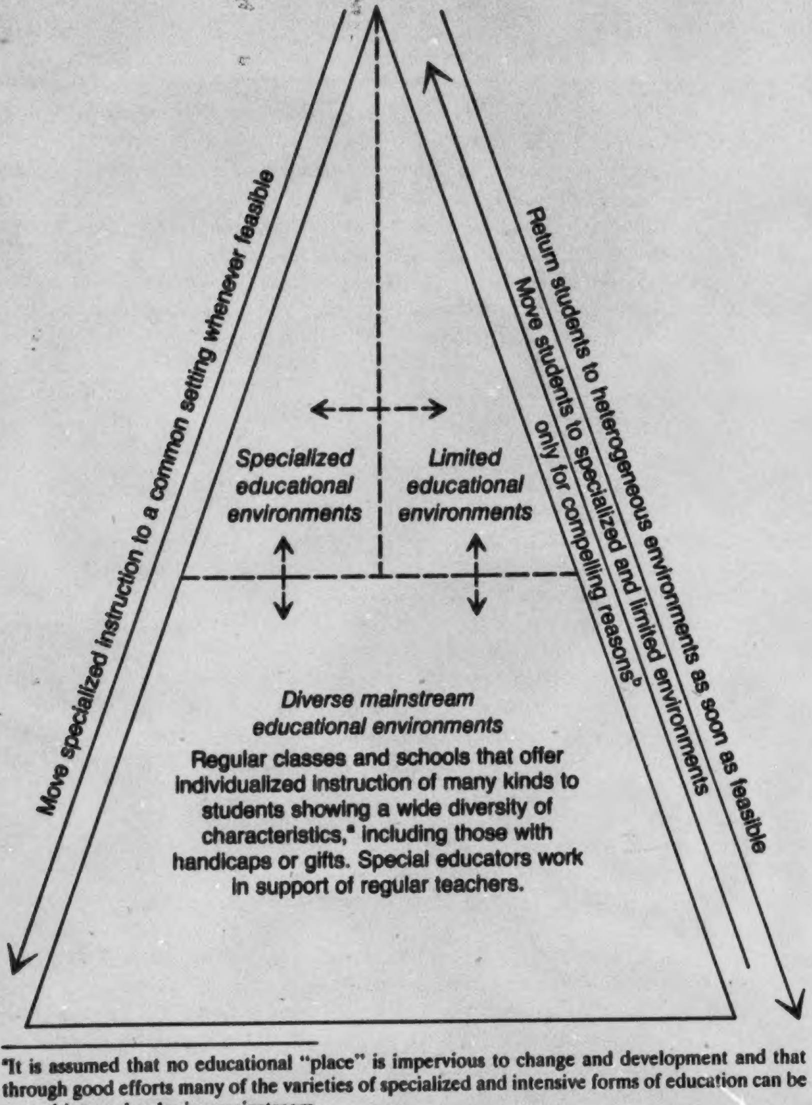
A new conception of the cascade is proposed as a way of organizing preferred practices for the future (see Figure 2–4). It presents the idea of making regular classes educationally more powerful and diverse, thus diminishing the need to develop and use separate specialized educational environments. In this scheme, all schools and classes have diversified staffing and offer many forms of individualized instruction to accommodate a variety of students with good results. Modern *systems* procedures are employed to manage individualization for all students.

The learning environment serves all students.

The curriculum includes teaching students to be self-responsible and mutually helpful. Regular school spaces are treated acoustically; they contain amplification devices and illumination as necessary so that all pupils, including those with limited hearing or vision, can use their senses maximally. Such environments have the learning centers, equipment, facilities, and materials to serve students with special needs and preferences. Regular teachers are challenged and shown how to become broadly resourceful in managing the rich environment and in serving the range of needs represented by the diverse student population. Special educators, other professionals, and aides are employed in collaborative teaching and supportive roles with regular teachers. Instruction is individualized for all students; categorizing and labeling are held to the maximum required by governmental agencies for reporting purposes only.

The instructional cascade gives priority to moving the various forms of specialized instruction into regular school structures. Some separate special-

FIGURE 2-4
The Instructional Cascade


Move specialized instruction to a common setting whenever feasible
Return students to heterogeneous environments as soon as feasible
Move students to specialized and limited environments only for compelling reasons[b]
Specialized educational environments
Limited educational environments
Diverse mainstream educational environments
Regular classes and schools that offer individualized instruction of many kinds to students showing a wide diversity of characteristics,[a] including those with handicaps or gifts. Special educators work in support of regular teachers.

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[a] It is assumed that no educational "place" is impervious to change and development and that through good efforts many of the varieties of specialized and intensive forms of education can be moved into a developing mainstream.

[b] Here, as in the case of the original cascade, it is assumed that students should be removed from the mainstream only for limited periods and compelling reasons; that their progress should be monitored carefully and regularly; and that they should be returned to the mainstream as soon as feasible. All students start their schooling in the mainstream and have a *place* there at all times, even though they may be located in a special setting for some period of time.

ized and limited educational environments remain, however (see Figure 2–4). These might include the following:

1. Psychiatric treatment/educational settings used for short periods to help some very severely disturbed children who, for instance, are destructive to themselves or others.
2. Special settings for the intensive treatment/education of students with highly complex motor problems; needed equipment required here (e.g., exercise pool, certain prosthetic devices, iron lung) cannot be routinely available in regular schools.
3. Situations in which children with profound and severe multiple exceptionalities are given a totally specialized curriculum each day.
4. Environments, for example, that have large amounts of nonportable equipment constructed for maximal efficiency in acoustic management and amplification for the intensive education of hearing impaired students for limited periods of time.
5. Alternative classes or camps for the intensive education of children who are floundering in or are unresponsive to regular school environments.

Some special settings serve complex needs.

Children are moved to specialized environments only for a limited number of clearly specifiable special educational purposes which are demonstrably impossible to achieve in regular schools.

Pupils are sometimes segregated for reasons other than optimizing education, as in detention centers, hospitals or other medical settings, or in their own homes. That can happen because they are ill, have broken the law, or have severe mobility limitations. Occasionally, students are still confined, or set aside, in limited settings because of presumed violations of social norms (e.g., pregnancy or drug addiction). Though special educators administer programs in such limited settings, the instruction is seldom special. Too often it is minimal maintenance level teaching of basics, in the hope that not too much will be lost before return to regular schools.

Use of limited educational environments should be minimized.

Placement of students in such limited environments should be held to an absolute minimum. Of course, no matter how long children are confined to such places their educational needs continue. In Figure 2–4, limited settings are included within the general cascade arrangement, indicating that educators have a responsibility for pupils in detention centers and similar settings, to ensure appropriate education and coordination with other school programs.

A particular difficulty exists, of course, when an educational environment is both specialized and limited. For example, a residential school that enrolls only blind or mentally retarded children and offers instruction only by specialized methods is poorly equipped to prepare students for open community life. Similarly, a juvenile delinquent who lives only with other delinquents and receives an educational program that is very limited in range is also in a highly homogeneous and, in this case, a potentially damaging environment.

Specialists based in residential schools for exceptional children sometimes argue that regular schools are more restrictive environments than are residential schools (Blevins, 1978; Craig, 1979). They fear that regular schools will interpret and implement special education at a lower quality level than will residential schools.

Even though some residential school leaders voice misgivings, their trend is to take active part in two major moves. The first is to guide, develop, and support excellent special education for exceptional children in regular schools. As a result of that outreach, the population of many residential schools has dropped sharply; faculty have been retrained and redeployed to work out from the schools as guides and consultants to growing regular school programs. The second move is to encourage admission to residential schools for pupils who present more challenging and more complex educational problems. These are pupils who, for example, may be hearing impaired but who show other developmental exceptionalities, too. Thus, many of America's leading residential schools are retooling to tackle even more involved kinds of special education than they dealt with in the recent past.

All children should begin their education in the mainstream.

It is preferred practice that all students begin their education in regular classes. If they need special help, it should first be brought to them there. They should be moved out only if it seems necessary after a thorough and comprehensive opportunity in regular classes. When a specialized setting is necessary, the child should be returned to the mainstream as soon as feasible.

Present-day assessment procedures, on their own, cannot determine with sufficient certainty whether children will do better outside the mainstream. Actual experience in an integrated setting is first necessary before such a determination can be made. Strong efforts should be taken to build appropriate instructional capacity into the mainstream for every student, thus limiting the need for other settings.

Children who live in institutions should attend community schools.

It is strongly desirable for children in residential institutions to be moved into community based day schools so that they can experience fully the richer diversity of companionship and educational stimulation available there. If students need highly specialized educational environments that are not within reasonable transport distance of their homes, group homes should be developed for them in communities that offer the needed environments. While boarding in the group home, students can attend the appropriate day schools.

In Odessa, Texas, a collaborative effort was initiated by probation officers, a county judge, and school administrators to create facilities and programs through which youth who had broken the law and were incarcerated in the local jail could receive appropriate education. A plan was devised to bus students from the jail to a community setting in which a comprehensive educational program was available. Through broad cooperation between county and school officials a major vocational training unit was added to the school. In 1976, more than a third of the students in the facility were reported to be those who had been in difficulty with the law, but who nevertheless were in a broad-based school program. (Dial, 1977)

Over 10,000 teachers, predominantly from elementary schools, answered questions posed during Instructor's *1979 poll. Over half (56%) had children with handicaps in their classes. Almost two-thirds (63%) of those teachers believe that mainstreaming is working for them and their pupils. (*Instructor, *January, 1980)*

Educational programs, wherever conducted, must be appropriate to the individual.

The courts and Public Law 94–142 posit the general principle that children should be educated in the *least restrictive environment.* Education must also be *appropriate.* Regular classes in neighborhood schools generally meet both criteria if they are properly planned, staffed, and equipped. However, the least restrictive environment *that is appropriate* for a particular pupil's education, for a time, may be a part-time resource room or even a full-time special class. Educational plans for every individual must meet both tests: they must offer appropriate education in the least restrictive alternative.

Returning or Never Leaving

In recent years a steady trend toward teaching more exceptional pupils in regular classes has been observed. The trend has been the result of two factors: (a) the return, for at least part of the school day, of exceptional pupils from special classes and schools; and (b) the gradual increase in the numbers of identified exceptional children coming up through regular grades who have never been displaced to special settings.

Figure 2–5 illustrates the trend. The dotted line shows the increasing proportion of exceptional students whose primary placements[3] are in regular classes. The solid line represents the declining percentages of children placed primarily in special classes and schools. Included are those pupils who never have had a primary special education placement outside the mainstream, plus those who were returned to primary placements in regular classes.

Referral out of the mainstream is less often practiced.

It was the negotiation for the return of exceptional pupils to regular teachers that dominated so much of the discussion about mainstreaming in the first years after passage of Public Law 94–142. Even the teachers' unions and associations were concerned with this influx of special pupils in regular classes, and gave the issue priority in negotiating with local school boards. It is important to distinguish the "return to the mainstream" phenomenon from the more permanent aspect of "never leaving the mainstream" which has been working its way gradually up from kindergarten and elementary school grades.

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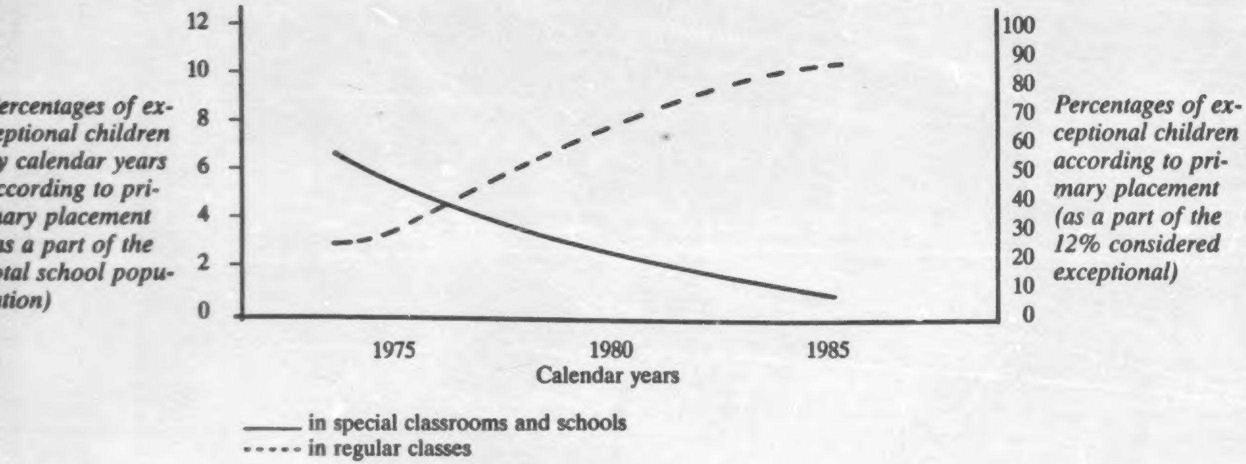
[3] "Primary placement" is an administrative expression. It refers to where a pupil's name appears on the school's roll for recording attendance. Primary placement in a regular class means that the pupil reports to a homeroom, which is a regular classroom, at the beginning of each school day and is a member of the class and starts the day in that room. As we use the term here, it also carries an instructional and attitudinal implication. Primary placement shows where a pupil is considered to belong and where instructional responsibility lies for the main elements of the student's curriculum.

FIGURE 2-5
Approximate Proportions of Exceptional Children in the U.S. Who Have Been and Will Be Placed in Separate Special Education Programs and in Mainstreamed Special Education Programs



Notes: The data lines are schematic approximations reflecting only trends, not exact data. No data count is known which would permit exact statements concerning primary placement proportions. The data lines also reflect only handicapped students; the percentages could well be expanded to about a 15% level to include gifted and talented students.

By about the mid-1980's, the "returned" population should be exhausted in most communities.

Consulting Processes: From Dyadic to Triadic Relationships

As more exceptional children are enrolled in regular classes, special educators are constructing stronger support systems for them. The teacher is the client and the pupil is the ultimate target (Figure 2–6). The special educator or other specialist (e.g., school psychologist) serves as the consultant. Their interactive relationship proceeds on the assumption that everyone involved is well motivated and dedicated to effective instruction.

Some guidelines for regular teachers to think about when they work with consultants are as follows (Parker, 1975):

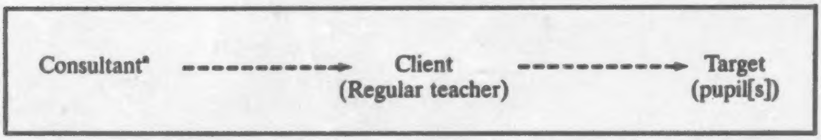
The regular teacher is in charge.

1. The teacher "owns" the problem and is in charge of the education of the pupil or the class procedures that are under consideration.
2. The teacher should be sure that there is early agreement with the consultant on the nature of the "problem" and on how decisions about plans for solution will be made. An oral or written contract should be reached early in the relationship on goals, methods, and responsibilities.
3. It should be made clear that the teacher is the client and that all communication flows to the teacher. The consultant is there to help structure the teacher's work, not somebody else's. This relationship does not preclude some direct assessment of children and observations by the consultant if agreed upon as part of the contract.
4. Status problems should be avoided. Consultants and clients are coequals.

Consulting relationships must be professional.

5. The teacher should avoid interjecting personal problems. The content of the relationship should remain centered on the student and the instructional situation.
6. The teacher usually should seek alternative suggestions from the consultant rather than a single or set plan.
7. Teachers should try to use each consultation as a learning experience to increase effective communication and listening, build trust with professionals, and maximize instructional effectiveness.
8. Each consultation experience should be evaluated objectively and the teacher's conclusions should be shared with the consultant.

FIGURE 2–6
The Consultation Triad



*Often the special educator or school psychologist

Mainstreaming in the Community

Mainstreaming is occurring in all aspects of the community.

Changes occurring in the schools are not just a reordering of the system for delivering special education services to exceptional children. They reflect broad social changes that are reverberating throughout the country. For example, some mental health professionals (psychiatrists, clinical psychologists, and social workers) have largely abandoned their clinics and are now functioning in various places within the community. Instead of working directly and solely to "fix" or "cure" the clients who come to them with problems, their energies have turned increasingly to providing environmental supports for the clients. Employers, wives, children, neighbors, and clergy are enlisted to build support systems to maintain individuals in familiar surroundings. The diagnostic studies required in such a broad context extend to the individual's total life situation. Similarly, treatment may be directed to the environment as well as to the individual.

Employers, neighbors, and others provide support.

In many communities, handicapped persons have banded together to press for better services from the public transit systems. Persons with motor handicaps often are not able to board buses in the quick manner required, and those in wheelchairs may be totally immobilized by the public transportation system. They want lifting devices to help take wheelchairs on board buses or trains. Transit agencies typically offer to send special mini-size "handicabs" for them, but handicapped persons have insisted on being mainstreamed, that is, on being able to use the mainstream bus or train system.

At the 1976 convention of the American Association for the Advancement of Science (AAAS), another example of broad changes was evident. Even before the decision was made to hold the convention in the city of Boston, clearances were obtained to ensure that all handicapped scientists attending the convention would have access to all sessions, and that hotels and other meeting places would have external and internal ramps to permit scientists in wheelchairs to move readily to meeting rooms, restaurants, restrooms, and hotel rooms. It meant also that the special symphony concert for convention registrants was held in a hall with appropriate ramps. Deaf scientists attending convention sessions were provided with interpreter services in the preferred communication mode. Blind scientists received advance manuscripts of presentations employing visual aids.

Conventions and conferences are being mainstreamed.

During the convention, 400 handicapped scientists met to help map strategies to permit *all* scientific meetings to be mainstreamed. They helped determine how special services could be provided, not in set-aside stations, but in the mainstream of conventions. The AAAS has since published a guide for use by other associations in arranging barrier-free meetings (Redden, Fortunato-Schwandt, & Brown, 1976). Handicapped persons want full entry, opportunities, and participation in all mainstream activities.

Further examples of what is happening in communities include mutual help groups. For example, many widows are turning to networks of other widows for help in dealing with problems of grief. Similarly, parents of handicapped children are helping one another in broad community networks. In such

Clinical professionals are moving toward more indirect services.

relationships they find immediate understanding and support far different from what is available from the clinical psychologist or psychiatrist. Indeed, such professionals increasingly find themselves involved in creating and supporting mutual help networks. Thus, many specialists are actively involved in changing and developing community structures to serve persons with special needs. In this activity psychiatrists, social workers, and psychologists find themselves engaged in the indirect processes of "helping groups of helpers to help" rather than in directly serving a limited number of clients at very high cost. The professionals "give away" some of their special insights and skills and take on an indirect support role rather than a direct service role. So it is for increasing numbers of specialists in the schools.

One of the reasons for innovations like walk-in clinics and mutual help networks is the sheer impossibility of supplying specialized help to everyone who needs it on a one-to-one basis. There simply are too many people who need help and not enough specialized manpower. There simply are not enough adequately staffed special environments where people who need help can be served productively. It is doubtful that the nation could afford such services, even if the specialized manpower problems were soluble. But beyond economics and manpower difficulties, it is clearly preferable that one's immediate and natural associates make accommodations to one's special needs. That is vastly to be preferred, on qualitative grounds, to referral to segregated settings.

Conclusions

New imperatives, judicial and moral, make more inclusive arrangements for schooling a necessity. What one might speak of as the era of mainstreaming, least restrictive alternative, progressive inclusion, or integration is a further advancement of a long trend in American education and society. The movement can be seen as an advance beyond the two-box theory of treatment in which a person is either normal and law abiding and needs no special treatment, or is sick, poor, disturbed, asocial, or old and, therefore, institutionalized for treatment and care.

The mainstream must be transformed.

Regular school environments must be transformed to include a greater diversity of students and instructional offerings. When that happens it will be less necessary to displace students to specialized and limited environments. Certainly not all students will be well served in the mainstream. Some specialized school programs will continue to be needed in special classes and other separated settings. But the processes that are used to assign students to special settings will need to be justified with great care.

Some educators may wish for special education to continue its separate status, take its exceptional pupils off to separate enclaves, and use all the special funds for its separate operations, thus leaving the regular schools without this challenge. But it is not to be so. The agenda before all educators is the creation of a single, unified school system that serves *all* children in the most inclusive possible manner.

Mainstreaming . . .

- *is part of the international change in social values and national change in public policy.*
- *is based on a conglomerate of state and federal laws, constitutional provisions, and court decisions.*
- *differs significantly from state to state because, for education, each state is like an individual nation.*
- *calls for the deliberate merger of special and regular educational systems, creating new professional job roles.*
- *was in full operation in several school systems long before the legal mandates.*
- *is made up of two components: temporary ("Bring them back"); and long-term ("Never let them go away!"). It will probably take 5 to 15 years from now (early 1990's) before most kinks are worked out.*

From a speech by Jack W. Birch in 1980

Prevailing Versus Preferred Practices

To aid in understanding the rapidly shifting dimensions of special education, most chapters of this book cite a list of current and *prevailing* practices in some aspect of the education of exceptional pupils contrasted with a list of *preferred* practices.

Practices are continually evolving.

Prevailing practices are those that are in widespread use; preferred practices are those that are as yet in limited use but should be adopted, we believe, by more personnel. Preferred practices are advances that have been shown to be appropriate, effective, and feasible. One example is the trend to enroll exceptional children in kindergarten or first grade with their nonexceptional peers. Another example is the growing recognition that teachers and parents are coequals in making decisions about the education of exceptional children.

Not all emerging practices are preferred. The line that is drawn between prevailing and preferred practices blurs in actuality because school systems are constantly in a state of becoming.

Prevailing Practices	**Preferred Practices**
1. Special education is conducted mainly in separate, specialized settings, such as special classes, resource rooms, or special schools.	1. Special education is conducted as an integral part of the unified school system; as much of it as possible is made portable and provided in regular classes and schools. Specialized settings are used only for essential purposes and limited periods of time.
2. Special education is managed mainly by highly centralized	2. The administrative management of special education is

	Prevailing Practices	**Preferred Practices**
	and specialized officers of the school system, all distinctly set apart from the leadership of the general educational system.	highly decentralized and in the hands of regular school principals and other line officers.
Exceptional education begins at birth.	3. Educational programs for most exceptional children tend to start at 5 to 6 years of age, with some special programs, such as those for deaf children, starting earlier.	3. Special education begins at birth or as soon thereafter as it is needed for exceptional children.
	4. Handicapped students tend to be excluded from many programs at secondary and higher levels of education, and especially from vocational education.	4. Exceptional students are given full opportunities for education in all schools, including secondary and vocational schools, colleges, and expanding lifelong learning programs.
	5. Placements in special settings are made on the basis of classifying a child into a category of handicapping condition or giftedness.	5. Children are separated from regular classes only when necessary for specific forms of instruction; many children, consequently, even those with severe handicaps, remain in regular school settings all or most of the time. The simple categorizing and labeling of students are minimized.
Specialized staff share their skills.	6. Special educators, school psychologists, speech-language clinicians, school social workers, and other specialized staff members provide services directly to children and families in clinical settings.	6. Special educators, school psychologists, speech-language clinicians, school social workers, and other specialized staff members emphasize training as a professional function, and they work to "give away" as many of their competencies as possible to teachers and other staff members; in addition, they work directly with exceptional students.
	7. As spaces for instruction, schools consist mainly of series of "boxes" that have little provision for variety, easy access, and flexibility.	7. Schools, as physical settings for education, provide barrier-free, safe, interesting, flexible spaces for all children, including those who are exceptional.

Prevailing Practices	Preferred Practices	
8. Special education financial aid to local school districts is allotted mainly to programs that isolate exceptional children in separate school settings.	8. Special education financial aid is used to support all forms of special instruction, including those conducted in regular classroom settings.	
9. Instructional materials for exceptional pupils are limited and available only to special education instructors.	9. Adequate instructional supplies and materials are provided for all teachers, thus improving their accommodative power in dealing with individual differences among learners.	*Adequate materials enhance instruction in the regular class.*
10. Teachers "refer" special "problem children" to specialists.	10. Teachers call in or consult with specialists to help with problem children right in the classroom as the preferred first step.	
11. Parents are usually informed about the specialized programs that are provided for their children.	11. Parents participate fully with teachers and other staff members in all decisions on specialized programs for their children.	*Parents are full partners in decision making.*
12. Reading instruction is conducted at multiple levels in most elementary school classrooms, but other aspects of the curriculum are standardized for all children.	12. Modern management systems for instruction and curriculum differentiation permit considerable variety in programming to accommodate individual readiness and needs in all subjects.	
13. Some children start every school year in the regular classes of their schools, whereas others always start and have their basic enrollment only in special education programs.	13. All children, handicapped and nonhandicapped, begin their first year of schooling and every successive year in a regular school program.	

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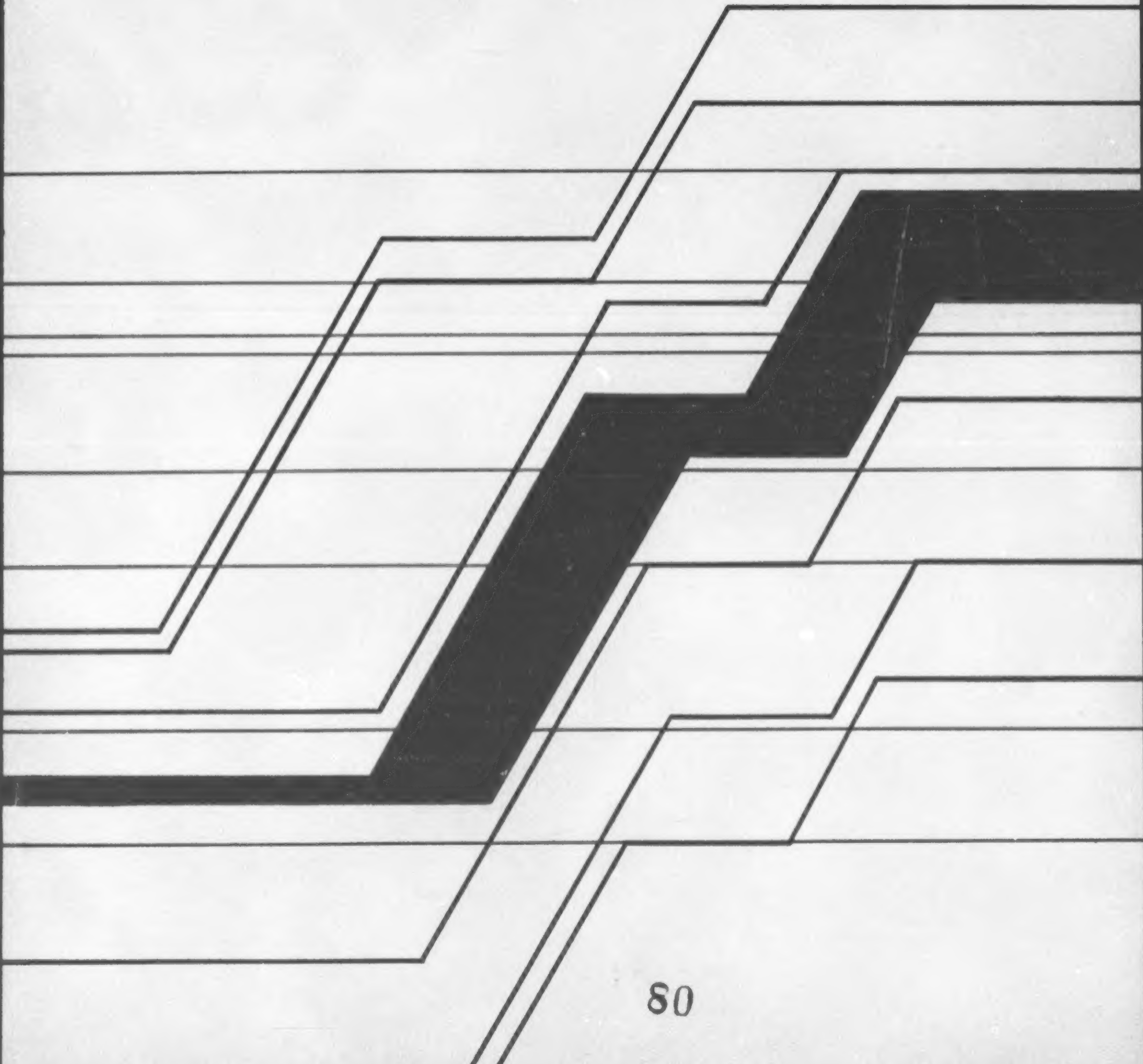
CHAPTER 3 Assessment



Chapter Outline

- The Meaning of Assessment

- Assessment of Individuals
  - Screening
    - Methods of Screening
    - Screening Efficiency
  - The Case of Erick Revisited
  - Educational Diagnosis
  - The Decisions to be Made
    - Eligibility
    - Categorizing and Labeling

- Assessment of Programs
  - Adaptations in Programs
    - Social Environment
    - Management and Order
    - Degree of Structure
    - Versatility in Instructional Methods
  - The Case of Erick: Results of Assessment

- Contemporary Problem Areas in Assessment
  - Discriminatory Testing and Assessment
  - Minimum Competency Testing
  - Intelligence Testing
  - Criterion-Referenced Versus Norm-Referenced Testing
  - Grading for Exceptional Students

- Characteristics of an Adequate Program of Assessment

- Prevailing Versus Preferred Practices

- Topical Bibliography

The Meaning of Assessment

Erick, age 5, is observed by his kindergarten teacher to be immature in language and social abilities, somewhat awkward physically, and quite often distracted or inattentive when other children are "on task." The observations were made in November of the school year. One parent-teacher conference had been held in September. At that time, Erick's parents had not indicated any special concern, but the teacher had expressed the intention to observe Erick closely. Now another parent conference is in the offing, and Erick's progress calls for a report of "unsatisfactory." The teacher has told the school principal of a growing belief that Erick may have a significant problem. He may be in need of special education and related services.

Teacher observations are often the starting point in assessment.

1. What sequence of steps should be taken to pursue this situation and by whom? Should a special educator or school psychologist be consulted?
2. Does the school have a legal responsibility to identify Erick as a handicapped child, if indeed he is, and to write an IEP for him?
3. Assuming that Erick has not had a recent medical checkup, how should a thorough examination be secured for him? Who should pay for it? Should the physician be told of the teacher's concerns?
4. Who should be responsible for integrating all the information gathered on Erick and for consulting/planning with his parents?
5. How should the procedures differ if Erick is bilingual or a minority group child?

Literally hundreds of thousands of children like Erick are found each year in the schools of the United States and Canada, and many more in other parts of the world. The concerns prompted by such students should lead to careful studies as the first step in designing individual, appropriate school programs. This is the purpose of assessment.

In the schools, assessment refers to the systematic processes of assembling and using information to make decisions on the instruction of students. It consists of two parts: (a) child study, to determine the student's present status in education and other characteristics that should be considered in educational planning; and (b) the study of the child's total environment, including the school, to ascertain the best possible conditions to influence the student. Both the child and the situation must be considered, for either or both may be integral to the educational plan which is developed. In this chapter the two main parts of assessment are considered under the headings "Assessment of Individuals" and "Assessment of Programs."

Assessment includes the study of students and their life situations.

Testing is only one way of obtaining information about an individual; assessment involves far more. It may include such aspects, for example, as examination of school and health records; a case history prepared by a social worker; interviews with parents, teachers, or other persons; observations of the child in the classroom or in other settings; the use of educational or other tests; and special examinations conducted outside the school by specialists. Nothing is taken for granted. Every factor that could reasonably affect how the child learns is examined and its possible influence is evaluated.

Much more than testing is involved.

A variety of decisions must be made in the typical special education assessment process which can be framed in terms of the following questions:

- Should the student be studied in detail? (This is the screening problem.)
- Does the suspected problem actually exist? Is it accepted by the parents and others?
- Precisely what is the nature of the problem and how serious is it?
- Is the student eligible for special education and/or related services?
- What educational program is suggested? (What goals and objectives should be pursued and by what means?)
- Is the student's mainstream educational resource capable of offering the suggested program? If not, how can it be augmented so that it can?
- Do the results of the assessment and the educational plan accord with the parents' perceptions and preferences?
- Has the plan been put into practice? How effective is it?
- When should the special plan be terminated?
- Has anything been learned from this student which has general implications for the teacher, other school personnel, other students, or the school?

Assessment of Individuals

Screening

Both pupil and environment are studied.

The assessment of students often proceeds sequentially through two major steps: screening and educational diagnosis. Educational diagnosis is synonymous with *thorough assessment of both the pupil and the environment.* It is not stated in terms of one- or two-word labels (e.g., diabetic, cerebral palsied, mentally retarded), as medical or psychological diagnoses might be. Rather, educational diagnosis is stated in terms of the child's present educational attainments (e.g., reads orally with good pronunciation and speed in fifth grade material, but cannot answer fact or thought questions on the content immediately afterward).

The first step, screening, serves merely to locate students who need educational diagnosis. Educational diagnosis then identifies detailed characteristics of student and environment. These are used to help make decisions on instructional modifications that may be essential for the student's development.

Methods of Screening

Screening may suggest a need for detailed study.

When a nurse or aide detects an apparent hearing or visual impairment in a child through brief, initial tests, that child is said to have been "screened out" as one who needs more thorough study by a hearing or vision specialist. Educators use the term in a similar way. For instance, a group test in reading may be used to determine which children appear to read substantially less well than others who have had equivalent schooling. Those youngsters "screened out" are then subjects for more comprehensive study, i.e., educational diagnosis.

Screening may be conducted using formal or informal devices. A combination of both is often most helpful. The Denver Developmental Screening Test (DDST) is an example of a formal device used by a wide variety of professional workers to screen children up to the age of 5 for general developmental delay. Pediatricians, for example, are more likely to use this test than any other. It involves observations of the child in problem-solving activities using toys and other objects familiar to children; information about self-dependence skills gathered in a parent interview; evaluation of verbalization; and a physical examination. It yields age-equivalent scores on gross-motor, fine motor, adaptive, and personal development (Frankenburg & Dodds, 1967; Frankenburg, Goldstein, & Camp, 1971).

Informal observations are one important approach to screening.

Parents or other adults who observe children may screen them informally by noting unusual rates of development, unusual behavior, or episodic functioning problems. Erick's kindergarten teacher was using informal screening methods in observing him. Informal processes may be systematized somewhat by giving parents and other people some information on the kinds of observations to make. The Northeast Ohio Regional Resource Center, for example, asked parents to complete a form that included the following section:

> What is your child's age? ______
>
> For his age, do you feel he often has too many difficulties in any of the following areas? If so, please put an "X" in front of those areas he has difficulty in.
>
> ___ Walking
> ___ Talking
> ___ Seeing
> ___ Hearing
> ___ Accepting responsibility
> ___ Controlling temper
> ___ Dressing
> ___ Following directions
> ___ Eating
> ___ Toileting
> ___ Sleeping
> ___ Fighting
> ___ Playing with other children
> ___ Playing alone
> ___ Learning new things
> ___ Emotions
> ___ Reading, writing, or arithmetic
> ___ Sexual behavior
> ___ Thinking clearly

All student examinations can serve screening purposes.

. Screening also may use the records of health-serving agencies, "awareness" campaigns in newspapers or other media, and special preschool and in-school screening activities. All examinations of children which are performed in school and elsewhere should serve screening purposes.

Screening Efficiency

Screening systems are often quite subjective in that they use "broad band techniques," that is, rather superficial scanning across broad domains. Two kinds of errors can occur in screening: *false positives* and *false negatives.* A false positive is the incorrect identification of a person as having a problem;

a false negative is the failure to detect a real problem. In general, there is more concern during screenings for avoiding false negatives than false positives; you do not want to miss the child who has a significant problem or need. On the other hand, screening procedures can be highly inefficient when they simply refer too many children as having problems.

Procedures should be efficient as well as effective.

Standards of *efficiency* and *effectiveness* are sometimes used in connection with screening. A procedure is said to be effective if it actually identifies all or most of the "positives." It would be very easy to be effective, of course, simply by calling every child a positive. The concept of efficiency takes account of this problem. Efficiency is defined as the percentage of positives or referrals for educational diagnosis which are correct (Pegnato & Birch, 1959).

The Case of Erick Revisited

The brief case study of Erick presented at the beginning of this chapter was followed by a set of questions. The first of these questions can now be considered: What should be the sequence of events following the teacher's identification (screening) of Erick as a student who might need special education or related services? The answer to that question applies not only to Erick but to all students who have been screened and found to be "positives"; that is, the student should be studied more thoroughly. The steps, in sequence, are as follows:

Consult with parents following a "positive" screening.

1. Consult with the parents to propose a plan for the study of the child, and receive their permission to proceed. Alert parents to all their legal rights, such as the right to see all records on the child and to receive a report of the results of the study.
2. Conduct the study as planned and agreed to by the parents.
3. Arrange a meeting with the parents when school personnel can present an integrated report of their study of the child and, at the same time, get the observations of the parents. A plan (individualized education program, IEP) for the child's education is then developed. (If the child qualifies for reimbursable special education or related services, such a plan is required in the U.S. under Public Law 94–142.) Again, parents are alerted to their legal rights, which include having a counselor or advocate attend the meeting with them, and the right of appeal to higher authority on decisions presented at the meeting with which they disagree.

In Erick's case the school principal discussed Erick with the special education resource teacher and with the school psychologist who serves the school. They agreed that Erick should be studied in detail. The resource teacher, acting for the school staff, contacted the parents and suggested a plan for study that included the following elements:

1. The parents would be asked to arrange a thorough medical examination for Erick. There was no medical information in the school records, and it was important to know whether he was in good general health. Also, because

Erick was physically awkward and highly distractible in school, neurological implications (petit mal epilepsy?) were thought possible, although of low probability. The parents' permission would be asked for the school staff to communicate their observations to the physician in advance of the examination.

2. The school psychologist would assess general cognitive development through testing and classroom observation. Classroom observations would also be used to judge carefully the degree of Erick's inattentiveness and what conditions were associated with his being "on" or "off" the tasks assigned by the teacher.
3. The special education resource teacher would check Erick informally on language development and specific preacademic skills.
4. The physical education instructor would observe Erick and consider possible assistance that could be given to minimize his awkwardness.

Classroom observations provide important information.

The parents agreed readily to the plan but asked for help in paying for the medical exam. The resource teacher agreed to contact the Maternal and Child Health unit of the State Department of Health, which operates a financial support system for child medical examinations. The resource teacher informed the physician that the school concerns were, first, with Erick's general health and, second, with his apparent high distractibility and physical awkwardness; no specific examinations were requested. It was agreed that the physician, of course, would interpret his findings directly to the parents but, also, if the parents gave permission, to the school by a brief summary letter. In turn, again with parental consent, the school would report back to the physician all the findings of the child study.

Educational Diagnosis

When screening identifies a child as a "positive," attention turns to educational diagnosis. It is important to recognize two major aspects of this transition.

The purpose of screening is to identify persons who should be studied more intensively.

First, the variables that are useful in screening often are not relevant to educational diagnosis. In instances of deafness or total blindness, for example, identification or screening is based on sensory deficiencies, but educational diagnosis and instructional planning obviously depend upon other variables. If a child has no hearing, education must proceed through other channels. Similarly, a child who shows a very slow rate of cognitive development may profit more from a program that emphasizes social skills and motivation than from one that stresses cognitive development itself. Thus, screening and educational diagnosis are often distinct problems.

Second, good instructional procedures are not always available to treat (or educate) children who have educational problems. Until Louis Braille created the reading system that bears his name, the possibilities of teaching totally blind persons to read were nil. Today, there are great difficulties in teaching all that we would like to severely handicapped children. Educators, like other

We don't know how to teach all exceptional children as well as we would like to, but all *children can learn!*

professionals, must be prepared to accept some casualties. In the future, treatments may be created to deal with problems that now seem insoluble, but at any given time the limitations of reality are inevitable.

It is helpful to systematize thinking about educational diagnosis. The *ABCD* approach, suggested by Cromwell (1976), is useful not only in thinking about assessment but, also, in thinking about how a knowledge-base relating to diagnosis is structured. The *ABCD*'s involve consideration of the following four general classes of information:

A = *Historical information,* such as genetic history, family history, medical history, early developmental history of the child, early school performance, including specific successful and unsuccessful curricular experiences, etc. These data are found mainly in records or gathered through interviews.
B = *Current status,* including present levels of development in areas such as intelligence, social maturity (self-dependence), academic skills, motor behavior, speech, personality, interests, and health. These data are gathered by testing, observation, interviews, performance or product evaluations, etc.
C = *Instructional alternatives,* including programmatic options available in the regular and special education programs provided in the child's local school and the larger school system, plus the potential for changing and intermingling parts of all such programs. Characteristics of the child's teachers and the school facilities are also considered.
D = *Program outcomes,* including a delineation of the goals and objectives which are important to pursue on a timeline for the student.

The problem of diagnosis in this framework is to study the *A*'s and *B*'s (background and present status) in relation to the *C*'s (program possibilities) and to achieve a "match" or the best possible combination of pupil and program to optimize *D* (desired educational results or outcomes).

It is the teacher's responsibility to individually design and conduct *C* in order to maximize *D*. The teacher asks for help from the parents, special educators, the school psychologist, and other personnel in order to decide on the *C*'s that are appropriate for a particular child. Much of the attention of those who consult with the teacher may focus on *A*'s and *B*'s, but it is the *C*'s—the instructional interventions—that are pivotal in educational diagnosis. Teachers are right to insist that discussions about *A*'s and *B*'s be limited in the main to those that are definitely relevant to instructional planning.

Multidisciplinary diagnostic teams focus on instruction as the key problem in educational diagnosis.

One can think of the knowledge base for assessment and diagnosis within the structure provided by the *ABCD* terms. Some knowledge may be of the *ACD* type; that is, the history *(A)* of a child may tell us something about how to teach the child *(C)* to achieve certain objectives *(D)*. Teachers often feel, for example, that if a child has failed badly *(A)* in one system of instruction or series of readers, it is better to use different materials and systems of teaching *(C)* in later remedial efforts. Knowledge claims of this *ACD* type have a degree of clinical validity and probably are worthy of attention in planning.

Sometimes teachers encounter more complicated knowledge claims about diagnosis such as the following *ABCD* formulation: "The reading problem is the result of perceptual problems which are the result of neurodevelopmental problems." In this case the history *(A)* of a neurological problem is said to predispose both the perception and reading problems (*B*'s shown by current testing). In effect it is claimed that there has been an ordering of events or dispositions from neurological to perceptual to reading problems. In such a case it is not uncommon to suggest that the teacher teach directly to the child's "perceptual" deficits *(C)* on the assumption that results will transfer to reading. Knowledge claims and prescriptions of such complexity are often poorly supported by evidence, and teachers do well to be very cautious about focusing their instruction on goals and objectives which are far removed from the ordinary school curriculum.

It is common for assessments to fall into a *BCD* framework. In this case, one is concerned with the careful delineation of a child's present level *(B)* of development and functioning as a basis for planning instruction *(C)*. It is advisable for teachers to insist that *BCD* types of diagnosis focus mainly on practical, curriculum based characteristics of the child rather than on presumed "capacities" or other attributes which are not directly linked to instructional planning and management.

Adequate diagnosis depends upon an adequate knowledge base.

It is possible, of course, to limit diagnosis to just a *CD* framework. Behavioral psychologists sometimes assert that history *(A)* and most pretesting *(B)* are irrelevant to instruction. Given an objective *(D)*, they are prepared to proceed directly to instruction *(C)*. They proceed in the instructional situation through the immediate management of stimulus materials and contingencies or consequences of the child's responses.

The Decisions to be Made

Eligibility

One decision which usually is made at the time of educational diagnosis is whether the student is exceptional, according to criteria used by governmental units. This is an administrative decision that relates to funding, not an educational decision that determines program. Usually the determination is whether the child falls within some category or classification, as specified in law or regulations. Of course, even if the student does not qualify for any such category but has special needs, it is the school's moral duty to respond with an appropriate program, which it may need to do entirely out of its own resources; most special education funding systems are tied to limited categories of children.

Eligibility is an administrative rather than an educational decision.

Categorizing and Labeling

Traditionally, special education has sifted children into a variety of "categories," such as mental retardation, learning disabilities, speech handicaps, emotional disorders, hearing impairment, vision impairment, gifted, and crippling and other health impairments. Classroom groups, teacher certification, legislative funding systems, and parent groups have tended to follow the same categorical delineations. Patterns have differed somewhat from one state to another. For example, Texas provides a classification called brain-injured, whereas most other states would serve such children under some other term and in different configurations of programs. The pattern of categories and labels used in the various states is influenced as much by political as technical considerations. When one label becomes stigmatic, perhaps through repeated court actions, other labels tend to be selected for increased usage. Regular teachers have learned to refer children according to existing systems of categories, and school psychologists and other personnel workers have performed their classification functions at the gateways.

Criteria of exceptionality are not the same in all states.

A number of problems emerge in connection with the categorizing of children and programs, especially when labels with negative implications are attached to the students so categorized, as in mentally *retarded,* emotionally *disturbed,* or learning *disabled.* Hobbs (1975) saw such classifications and labels as potentially harmful.

> Classification, or inappropriate classification ... can blight the life of a child, reducing opportunity, diminishing his competence and self-esteem, alienating him from others, nurturing a meanness of spirit, and making him less a person than he could become. Nothing less than the futures of children is at stake. (p. 1)

Classification of some kind is necessary.

Some form of educationally relevant classification is no doubt necessary; not all children can be educated effectively in exactly the same fashion. Human dialogue and the practical organization of work require some grouping of children. Even in a period of great controversy over classification systems it is necessary to be clear about them so that communications may continue among the educators who bear responsibilities in each area. But whatever classification system is used, it must give primary attention to the individuality of children and their needs.

> A ground swell of revulsion is occurring about the idea of labeling so many children—labeling them with single categories such as neurologically impaired, emotionally disturbed, learning disabled, mentally retarded, etc. These labels—of questionable reliability, validity and usefulness in educating children—tend to become public knowledge, publicly recorded; they follow children through life, affecting their lives, usually negatively.... It should be noted that while most people favor de-labeling children, there are some strong advocacy groups who disapprove for fear that removal of labels and categories will result in loss of

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"One must indeed avoid the mistake in assuming that 'the disabled' form a positively-defined group in any real sense. Like foreigners, they only constitute a group in a negative sense. All they have in common is a failure to meet certain societal norms that are imprecise and programmatically chosen. Other than this, a group designated as disabled may have nothing of significance in common." (Hegarty, 1981, p. 8)

> legislative and public support for handicapped children and/or that schools will divert funds intended for the handicapped to other purposes. (*New York State Psychologist,* 1979, p. 3)

Educators who work with physicians or psychologists frequently find themselves trapped in classification schemes that are designed to serve purposes other than those of education. Zubin (1967), a clinical psychologist, cited three purposes for the diagnosis and classification of people with problems: (a) to search for etiology, (b) to make a prognosis, and (c) to select a therapy.

Knowledge of causes does not translate to instructional methods.

It is clear that classification merely according to *etiology,* Zubin's first purpose, is not broadly useful in education. Knowing the cause of poor sight is of little help in deciding how the child with poor sight should be taught. For educators, etiological variables are only occasionally useful, and then only in the context of the educational decisions to be made. In terms of the *ABCD*'s, etiological classification is *A*-type information only. It is important to recall that *A*-type information is useful to the teacher only if it makes a difference in *C*, the instructional intervention.

Similarly, general *prognosis,* Zubin's second classification purpose, has limited usefulness for instruction. In education, prognostic classifications are most often *B*-type information. Usually developed on the basis of intelligence test results, they lead to general predictions of or "expectations" for educational progress. Educators are employed to influence children's learning, not simply to predict it. Educational decisions require attention to variables or characteristics that interact with instruction, that is, that help educators to make a difference rather than a simple prediction. Thus, general prognostic formulations are seldom useful.

Programmatic decisions are primary.

When the aim is to provide appropriate education for each student, the problem of prediction becomes one of choosing or designing an optimal program for each individual. Prediction of different outcomes for individuals within a single, fixed instructional program leading to selection or rejection decisions is not the main problem. Rather, the challenge is to consider simultaneously the variety of treatment possibilities that might be offered in the school situation and the differences among individuals, thus fostering optimal programmatic decisions for each individual. This is the ATI (aptitude-treatment-interaction) idea.

In technical terms, an ATI requires demonstration that an aptitude or attribute is acted upon positively by a treatment. For example, if there are two possible instructional procedures, the variable that produces a disordinal interaction with the treatments provides the basis for decision making. Teachers are constantly making informal ATI decisions. For example, a teacher may decide that Fred learns best when given short, closely monitored assignments, while Jenny is able to organize her own work over long time segments. The teacher matches instruction to the particular needs or most promising approach for each student. This is far different from using broad-band procedures, such as general scholastic aptitude tests, to make academic predictions.

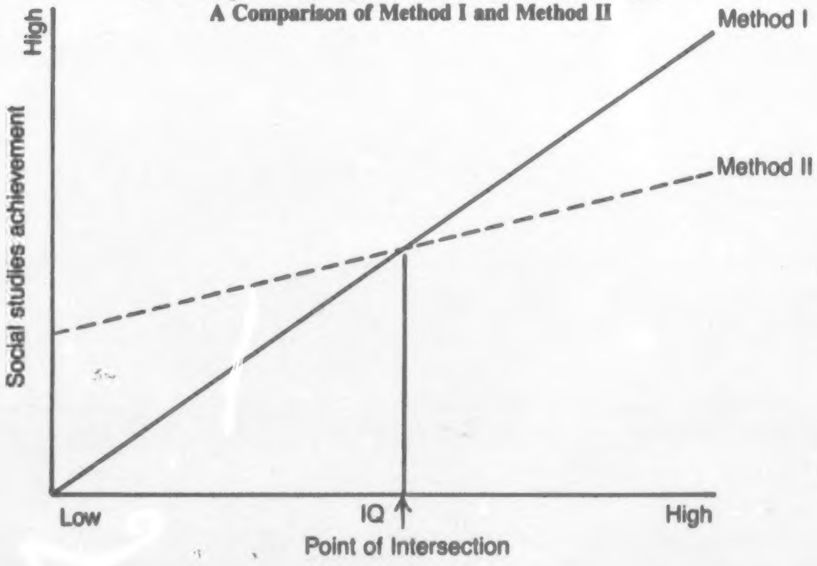
As a further example of the ATI model, suppose there are two ways of teaching a unit in social studies on the Bill of Rights. Method I (see Figure 3–1) is the read-lecture-memorize approach. Note that the correlation between IQ and achievement under Method I is relatively high, as shown by the steep slant of the regression line. Method II involves use of socio-drama in which students create courtroom scenes that illustrate basic rights. Notice that the regression line showing the relationship between IQ and achievement is lower in the case of Method II. If one were to predict achievement under Method II from IQ scores, the accuracy would be very low. Notice that the two regression lines intersect, which shows *disordinal* interaction. This kind of aptitude-treatment-interaction suggests that pupils with slowed cognitive development might achieve better under Method II, while pupils with accelerated cognitive development might achieve better, as measured in this case, under Method I.

Aptitude information is not useful in adapting instruction unless the aptitude and treatment interact—more specifically, unless the regression line relating aptitude to achievement under one treatment crosses the regression line for the competing treatment (as illustrated in Figure 3–1) (Cronbach & Gleser, 1965). An aptitude measure that validly predicts success within both treatments may have no value in deciding which treatment to use. This implies that general ability is likely to be a poor basis for differentiating instruction, because it correlates with success in most instruction (Cronbach, 1967, p. 30).

Educational classification should be related to instruction.

Zubin's third purpose for classification, the *selection of treatment,* is relevant in the educational context because in schools the important purpose of classification is to design or select appropriate treatment or instruction. Two

FIGURE 3–1
Relationship Between IQ and Achievement in Social Studies: A Comparison of Method I and Method II



Transactional Assessment

"Dr. Lauer made the point that any definition of handicap which placed the sole responsibility in the child's deficiencies furthers the very system of evaluation and placement which so many deplore. It encourages removing children from the contexts of their schools and families and allows diagnoses based upon their traits and characteristics in isolation of crucial interactive processes. It encourages the separation of diagnosis and remedial planning, the separation of regular and special education. It encourages the selection of a category for every child, a special class for every category, and a bureaucracy for every class. . . .

"She [advocated] a process in which an expert aids people—teachers, children, family members, or neighbors—in systematically observing and evaluating what goes on, assessing the outcome of the variations, and enjoying productive interactions." (This article, from New York State Psychologist *[1979], p. 5, reports the views of Dr. Rachel M. Lauer.*

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general classes of treatment should be distinguished, however. The first is oriented to negative criteria, in which case we use terms like *prevention, cure,* or *amelioration;* and the second is oriented to positive criteria, in which case we use terms like *development, competency,* or *achievement.* In the second case, the concept of prevention has no meaning or relevance.

Education is oriented to development and learning, not to recovery from defects.

Educational treatments almost always are positive, that is, oriented to competency or achievement. They are concerned with teaching and learning, not with the recovery from defects or the simple prevention of problems. The educator "prevents" reading failure, for example, not by creating antibodies but by teaching reading or its prerequisites with greater resourcefulness and better effect to more children. Thus, to be educationally relevant and to engage the teacher, the treatment must involve learning and development.

The view on classification proposed here is consonant with Zubin's third purpose, but only in the context of a developmental rather than a deficit-oriented concept of treatment. Unfortunately, there is still much talk among educators about deficits and disabilities, as if they were the starting points of education and as if recovery or remediation were the goal. Obviously, one prevents problems and creates a kind of invulnerability to insult whenever important competencies are developed, but let it be remembered that human development and the breadth that competencies give to life are the goals of education.

Categorizing of children is increasingly reserved for "reporting purposes" only.

Fortunately, the systems of classification and labeling used in special education are under modification in many places to make them more useful and less stigmatic for students. For example, in the California Master Plan for special education, which was launched in 1974 but fully implemented only in the early 1980's, exceptional children are referred to as "individuals with exceptional needs." The children participate in programs that bear labels of a kind but the students themselves are not labeled except as having "exceptional needs."

In the State of New York, changes made in the early 1980's also reduced the practice of labeling children according to categories of exceptionality. In New York and elsewhere it is becoming common to categorize children for reporting purposes only. In Illinois the state legislature called for special studies over a two-year period beginning in 1980 for the specific purpose of eliminating some of the difficulties engendered by the stigmatic labeling of children in special education. Clearly, the trend is growing toward the use of traditional classification systems in special education only for the statistical reports which are required by state and federal government, thus avoiding the attachment of labels to individual children. This trend portends major changes in the diagnostic processes followed in the schools, as well as in the roles of many specialists, particularly school psychologists and special teachers. Increasingly, instructional planning is coming to the foreground in educational diagnosis, while traditional categorizing is receding into the background.

Traditional categories and labels often cloud educational issues and disserve children.

The traditional categories for exceptional children do not "carve nature at its joints." Usually, they are not necessary or useful; in fact, they often serve only to devalue a child and becloud educational issues. Support is growing for the movement toward systems based on the idea of matching child and environment in ways that will be maximally productive for the instruction of students.

> The system should deemphasize the familiar but gross categories of exceptionality. It should specify instead the services required to assist the child or his family and school in the interest of the child's fullest development. (Hobbs, 1975, p. 234)

In each particular state, province, or other political unit it is necessary to understand the eligibility and classification systems which are required and to operate within their regulations. If such systems seem inappropriate, there is opportunity to work in orderly ways to modify them through professional and political processes; but in the meantime, to the extent that they have the force of law, they require at least minimal adherence. It is hoped that all aspects of the assessment process will be so managed that they produce no gross oversimplification in categorization and placement decisions and no stigma for the children involved.

Assessment of Programs

In the preceding section, attention was focused mainly on the individual student. At this point, attention shifts to instructional settings and programs. Classmates, teachers, and schools vary in their ability to accommodate to differences in students. What are the important aspects of school settings and operations which must be considered in planning for students with special needs?

Fifteen ways of looking at instructional settings and programs are offered in this section.[1] They propose ways of observing a class or a program when planning for exceptional students is necessary. In each of the 15 dimensions a standard is suggested along with a set of questions that might be asked in assessing how well a particular setting is suitable for a handicapped or gifted student. These dimensions are not a test; indeed, they are only a crude observational schedule, but they can be useful. In connection with each assessment area, one or more references to related literature on the topic is given. A significant, well established knowledge base supports high-quality school practice in each area.

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[1] The 15 dimensions are also available in the form of rating scales. Copies may be obtained upon request from the authors.

Systematic observation is broadly useful.

The systematic observation of instructional settings and programs, guided by the 15 dimensions presented here, is useful in three major ways:

1. *Matching students with promising settings and programs.* Obviously, one would not place a physically handicapped student in a school that lacked ramps and elevators. Neither would one place a student who reads poorly in a situation where everyone is expected to read the same difficult book without assistance. Thus, the first use of the observation of settings is to choose an appropriate learning environment for an exceptional student.
2. *Planning for staff development.* The total school faculty or individual teachers could use these guidelines to examine their instructional situations, note where improvements might be needed, and then engage in inservice training programs or other improvement activities. The important point to emphasize is that classes and schools are not static. A school that does not accommodate well to handicapped or gifted students this year can do better next year. Thus, the 15 ways of observing schools may be helpful in organizing approaches to professional development and school improvement.
3. *Presenting an image of a mainstreamed school.* Taken together, the 15 dimensions describe how a very good mainstreamed classroom, school, or program might look. Not very many classrooms and schools could earn high marks on all dimensions at this time; the schedule is not intended to be used to reflect negatively on teachers or settings. Rather, the dimensions are intended to present an image of what a truly good school could look like and what developments are required if exceptional students are to be well served. The mainstreaming movement calls for the reconstruction of the mainstream school situation. The dimensions are some aspects of that reconstruction effort.

Following the presentation of the observation dimensions, several examples are given of how the various topics can be given detailed attention, both in assessment and in making improvements.

1. Space and Facilities

Areas of Inquiry	*Standard*
Are all elevation changes in entryways and within the building served by ramps or mechanical elevators?	The classroom is carpeted and treated in other ways for sound control. Physical access is no problem for

Is instructional space adequate for storage and flexible use? Are instructional areas soundproofed to accommodate hearing handicapped persons?	persons in wheelchairs or persons who are limited in mobility skills. Adequate provisions are made for storage, flexible partitioning possibilities, varied classroom furniture, adapted toileting facilities, and like matters for accommodating to the physical needs of handicapped persons.

Resource

Birch & Johnstone, 1975

2. *Teaching-Learning Settings*

Areas of Inquiry	*Standard*
Do instructional spaces include a variety of furniture such as desks, tables, and movable chairs? Are student desks, chairs, and tables varied in size? Are settings outside the classroom and school used when they are appropriate for instruction?	Instructional space is divided into various areas or learning centers that include adequate room for materials and students. Furniture is varied. Areas outside classrooms within the school and community are used with significant frequency for organized activities.

Resource

Aiello, 1976a

3. *Social Environment*

Areas of Inquiry	*Standard*
Are students expected and taught how to help one another? Are group activities graded and rewarded as such (rather than on an individual basis) part of the time? Are students mainly individualistic, competitive, or cooperative in class activities? Or, some of each?	The development of positive social skills and attitudes is an avowed objective of the teacher. Students are expected to interact with and to help one another. Sometimes they work on group projects, dividing up the work. The teacher teaches the skills of group processes and rewards effective group work through grading and other means. Students have every reason to be mutually helpful. Definite efforts are made to provide socially integrative experiences for exceptional students.

Resource

Johnson & Johnson, 1975

4. *Responsibility for Management*

Areas of Inquiry

Is the teacher the sole source of direction or management?

Are the students learning to be responsible for making their own educational plans?

Do students participate in management and in responsibility for the physical environment and general school operations?

Resource

McLaughlin, 1976

Standard

Students share significantly in the governance (policy making and administration) of their classrooms and school. Their obligations extend to other students as well as to school officials; they are expected to make the learning environment productive. They receive instructions when necessary to help them carry their share of management responsibilities. The teacher is the primary leader in the classroom but gives particular attention to encouraging constructive student initiatives and autonomy.

5. *Classroom Attention and Order*

Areas of Inquiry

What percentage of children are attentive when the teacher makes general announcements or gives directions for the entire class?

What percentage of time are students "on task"?

How frequently are instructional sessions interrupted by extraneous events?

Are all students clear about what they are expected to be doing?

Are materials and records in the classroom managed efficiently?

Resources

Borg, n.d.; Kounin, 1970

Standard

At least 90% of students attend when the teacher tries to alert the whole class; questions almost always serve as signals for all students. Systems for transitions, record keeping, materials management, and like matters are well understood and handled efficiently. Students are clear about expectations for and consequences of their behavior.

6. *Staff Collaboration*

Areas of Inquiry

How frequently do the school psychologists and other specialists go to

Standard

Systematic preventive studies become the bases for studies of class-

classrooms for observation and consultation?

When regular teachers refer problem students, are the students usually taken away or are programs in the regular classrooms modified to make them more accommodative?

Do teachers resist or welcome special educators when they come into their classrooms as "second professionals" to serve exceptional students?

room and home situations as well as of students and for broad improvement efforts. When troublesome issues occur and "problem" students are identified, specialists are called upon for consultation with teachers and initial attention is given to possible program modifications to accommodate student needs in the regular classroom.

Resource

Myers, Parsons, & Martin, 1979

7. *Versatility in Instructional Methods*

Areas of Inquiry

Do teachers use the same instructional methods for all pupils and all occasions?

Do specialists help teachers to apply special instructional methods when they are needed?

Are the teachers provided with inservice training in new modes of instruction?

Resource

Joyce & Weil, 1972

Standard

Teachers are able to use a variety of teaching methods, such as direct instruction, inquiry or discovery methods, precision teaching (behavioral), group instruction, instructional games, peer tutoring, etc. They have collaborative arrangements with special education teachers, school consultants, psychologists, or other specialists to help implement additional methods as they are needed.

8. *Curriculum Flexibility*

Areas of Inquiry

Is the curriculum defined mainly by the available textbook(s)?

Are several levels (in reading or difficulty) of text materials available to meet individual student needs?

Do students have some choices

Standard

Student interests guide selection of a significant portion of the content. Materials and content for each student are chosen according to individualized evaluation of previous performances, achievement, and interests. Instructional materials about what topics they will study and the materials they will use?

Is there an adequate library and multimedia facility?

include several levels of reading materials, collections of audiovisual materials, and instructional games.

Resources

Gagné, 1967; Meyen, 1976

9. Degree of Structure

Areas of Inquiry

Does the teacher arrange and control all details of sequence and pacing of instruction for all pupils?

Are students sometimes given broad topics for study and allowed to structure tasks in their own way?

Does the teacher recognize students who need more structure and those who need less?

Resources

Cronbach & Snow, 1977; Hunt & Sullivan, 1974; Tobias, 1976

Standard

Degree of structure is varied systematically so that students who need high structure get it and those who achieve better by creating their own structure are encouraged to do so. The teacher has structure clearly worked out for his or her teaching area and uses it creatively. (*Note:* Instruction shows *high* structure when the teacher controls the instruction in great detail; new concepts and discriminations are introduced and related in smooth, gradual, carefully sequenced order. Instruction shows *low* structure when students are "on their own" to a marked degree; they discover or create structure with but little control by the teacher.)

10. Rates of Learning and Behaving

Areas of Inquiry

Are all students in the classroom on the same page in the same book at the same time?

Are all students given the same homework or independent work assignments?

Does the teacher gather data systematically or when students are

Standard

Students proceed through instructional sequences at rates indicated by mastery examinations. Such exams may be given at any appropriate time. Entry to new areas may proceed at any time according to the individual's demonstrated readiness.

ready to move on to new topics or skills?

Are students allowed to vary the amounts of time they spend on particular units of instruction?

Resources

Deno & Mirkin, 1967; Gagné, 1967

11. Evaluation of Student Progress

Areas of Inquiry

Are only formal tests used in evaluating student progress?

Do all or most evaluations involve comparisons with other students?

Are students involved in and responsible, in part, for evaluating their own progress?

Do all students have an equal chance to be aware of their own progress?

Does the teacher know each student's present abilities in basic skills and accommodate to them accordingly?

Resources

Adelman & Taylor, 1979; Salvia & Ysseldyke, 1981

Standard

Assessments are partly test oriented but they include informal observations and assessments as well. All evaluation is specific to the domains of instruction and is mastery oriented. Assessments are quite frequent and integral to instruction. Occasionally, norm-oriented tests are used to give students a basis for comparing their rates of development with those of classmates. All students have a solid chance to gauge their own progress. The teacher is aware that not all learning can be assessed by another person; thus, students must evaluate their own growth as part of the total evaluation program and of their own development.

12. Affective (Emotional) Climate

Areas of Inquiry

Do students feel good about being in this instructional setting?

Do teachers regularly and deliberately work on making the climate constructive and positive?

Standard

Affective education is recognized as an essential component of the total curriculum *and* is systematically included in all subject areas. Administrators and teachers attend to their professional colleagues' affective

Is recognition given to student activities that help to build positive feelings and constructive relationships?

Do teachers have help from consultants when needed to build favorable affective environments?

Do students frequently receive reinforcement for good efforts and progress?

needs. Expert consultation is provided on affective education to both teachers and administrators. (*Note:* Affective education, as used here, refers to curricula that are designed to facilitate the development of a positive view of self, of learning activities, and of life in the school environment.)

Resources

Fox, 1974; Hlidek, 1980

13. Recognizing and Appreciating Cultural Differences

Areas of Inquiry

Do aesthetic experiences in the class and school include samples from a variety of cultures, including at least all groups found in the student body?

Is commitment to cultural pluralism evident in the curriculum and instructional materials?

Do majority values dominate the school?

Resource

Jones & Wilderson, 1976

Standard

Content, materials, and methods of instruction are made meaningful for poor and minority group children as well as all others. The commitment to cultural pluralism is real, especially as it is reflected in curriculum. Both students and parents from minority communities feel engaged and well understood in the school situation; they feel like equals among equals. Aesthetic school experiences include samples from all cultures represented by the student body.

14. Child Study Processes

Areas of Inquiry

Is child study limited mainly to testing and other procedures to describe students?

Do records of child study reflect the strengths as well as deficits of students?

Standards

Child study focuses on the positive development of increasingly accommodative learning environments. Children's diversity in needs and abilities is closely examined, not to identify individual deficits but, rather, to facilitate the planning of mod-

Is child study conducted mostly in special offices or in the "natural" environment of students?

Resources

Deno & Mirkin, 1977; Ingram, 1980; Salvia & Ysseldyke, 1981

ifications in school practices and in school/home environments. Specialists, such as psychologists, are heavily involved in program development as well as in child study.

15. Parent–Teacher Collaboration

Areas of Inquiry

Do teachers and parents meet only in crisis situations and under conditions of high anxiety?

Do teachers and parents meet regularly to deal with positive topics?

Do administrators enter teacher–parent relationships only in critical situations or as continuing facilitators of communication?

Resources

Kroth & Scholl, 1978; Seligman, 1979

Standard

Parent-teacher cooperation is close and continuous. As volunteer aides, members of various school committees, and cosponsors of school/community activities, parents join with teachers in enhancing and expanding children's learning and experiential opportunities. The atmosphere stresses creativity, mutual commitments, and trust. Administrators participate as leaders/facilitators. When severe problems occur, parents, teachers, and other school officials are able to work together cooperatively and creatively to serve children, rather than as adversaries.

Adaptations in Programs

How can adaptations be implemented?

To illustrate in some detail how program improvements and adaptations can be made, 4 of the 15 dimensions of observation have been chosen for more extended treatment. They are social environment, management and order, degree of structure, and versatility in instructional methods.

Suppose it were found in the assessment of programs that a problem existed in one of those four areas, and in order to facilitate the mainstreaming of exceptional students some changes were necessary. How could one proceed?

Social Environment

One clear outcome of the mainstreaming movement is that the characteristics of children in regular classes and schools become increasingly diverse. Teachers, on the other hand, have been oriented mainly to teaching children in homogeneous groups. The difference creates an obvious problem. When exceptional children remain in or are returned to regular classrooms the outcome can be very negative for everyone if nothing is done to make the social environment of the classroom more accommodative. It is not only the teachers who must be accepting and helpful; all the students must share the responsibility. Thus, the policies that call for more *inclusive* arrangements for handicapped and gifted students in the regular schools require major efforts to create social structures for the positive treatment of human differences.

Students must help to set decent policies for human differences.

Many classrooms still are organized with desks in rows so that students look at the backs of each other's heads. Interactions among students may be considered cheating. The atmosphere is often competitive, with little or no encouragement, instruction, or recognition for cooperative group activities. It can be a cruelty for the exceptional student if administrators and teachers try to establish mainstreaming in such an environment.

Imagine, on the other hand, a situation where some class time is given to small group work, and the groups are formed deliberately to be heterogeneous. Goals set for the groups require helpful interactions among students. Each student contributes an essential part of the group process, as if each were a piece in a jigsaw puzzle. The teacher explains the group structure, pointing out that individuals will be evaluated and rewarded according to the group processes and outcomes. The teacher serves as consultant to the groups to help further interpersonal and group skills. Organization and processes are designed to require frequent, helpful, and supportive interactions among pupils. Only under such conditions can one expect the development of mutual understandings, positive feelings, and a sense of safety and trust.

Students have every reason to be helpful to one another.

Teachers can learn to create social environments that encourage cooperation and reduce the likelihood of attaching stigmata to differences. Johnson and Johnson (1975), for example, described in detail methods by which teachers can teach for cooperation as well as for competition or strictly individualistic (solitary) behaviors. Skillful teachers will choose to structure their classes differently at different times for various purposes, but they will not neglect to structure complex positive interactions to help to accommodate exceptional pupils.

Students should learn to be cooperative in heterogeneous groups.

A wide variety of helpful materials for teachers is now available to assist in teaching nonhandicapped children about handicapping conditions and about how exceptional children prefer to be treated. These include children's books about handicapped persons and guides for teachers on how to manage the introduction and instruction of exceptional students into regular classes (Bookbinder, 1978; Litton, Banburg, & Harris, 1980; Madsen, 1980).

Management and Order

Class management and order is another important dimension of assessment. The incidence of problem behavior in school is by no means totally a function of the characteristics of children. Management that provides inadequate or inconsistent cues, or that fails to bring the group to attention when a total group alert is intended, leaves children in confusion or without a sense of

The teacher is not the only manager in the class.

direction for long periods of time. When teachers permit activities to be completed before clarifying expectations for the following period, when materials are left in poor order, or when consequences of misbehavior are inconsistently delivered, the results usually are disorder and what, finally, may be labeled misbehavior by students. When behavior disturbances occur in a classroom with some frequency, the problem may not be centered in the student alone. Diagnostic studies should be made of the teacher and the classroom environment as well. Treatment may be required for the total classroom situation. The diagnosis may point to improved teacher preparation and consultation as well as to therapy for the child. These are not matters in which teachers need to feel inadequate or guilty. The challenge of management and order in today's schools is very great, and it is a sign of professional strength for a teacher to acknowledge difficulties and to be open to consultation that promises improvements.

It is a sign of good teaching to ask for consultation on management problems when needed.

Fortunately, these matters have had significant attention in the professional literature and practice of education. For example, the Borg training materials (Borg, n.d.) were developed to translate the observational work of Kounin (1970) into a teacher-training system on classroom management. Use of the system is intended to result in reductions of disturbing behavior in regular classrooms. Kounin observed, for example, that disorder often occurs when teachers lack skills to achieve the attention of an entire group when that is what they want. The implications of such observations sometimes are quite simple. For example, if a teacher wants to maintain group attention during recitation activities, it is important to ask the question first and *then* call on a particular student for response. The teacher would ask, for example, "In what directions would you expect most rivers to flow in Missouri? John"; not, "John, in what directions would you expect most rivers to flow in Missouri?" Similarly, in oral reading, the order in which children are called upon to read should not be scheduled in advance. If that is done, the *group* alert will be lost. Individual students will tend to pay attention or to be "on task" and academically engaged only when they expect to be called upon soon. If academic engagement is lost, learning suffers and problems mount.

Managing transitions is important.

Another condition that produces disorder is the management of transitions between educational activities. It is important to maintain attention to classwork and not permit distractions for significant periods of time. This goal can be accomplished only if the teacher consolidates many management duties into preplanned transition periods and avoids discontinuities in important teaching segments of the school day. Borg has considered such problems in his training system (Borg, Langer, & Wilson, 1975). Many other approaches to management and order have been developed and can be applied in school situations (Bents, Lakin, & Reynolds, 1980).

Degree of Structure

One of the most important factors in the individualization of instruction is the management of structure. Children who show relatively poor progress in the initial phases of acquiring basic skills seem to profit most when they receive intensive, direct, carefully structured lessons. Such programs proceed only from strength to strength, achievement to achievement, and task to task in smooth steps arranged by the teacher, who has organized the curriculum by carefully structuring the tasks in sequence.

Highly structured teaching is usually wise for those who are not learning the rudiments of a subject.

When children who do not "catch on" readily to the rudimentary steps of basic subjects are pressed along too rapidly, their initial confusion turns into serious and longstanding failure to achieve. This is the kind of situation in which the special education teacher is called into the breach to try to solve the student's "learning disability" problem by providing highly structured teaching.

Many special education teachers can well be described as experts in highly structured teaching; they know about and are much experienced in microlevel analysis of a child's skills and in offering systematic, carefully sequenced instruction. The challenge now is to provide such highly structured teaching in the regular classroom when it is appropriate, long before problems become serious. This goal may require assistance from the special education teacher and/or paraprofessional aides in the regular classroom.

In some instances, structure is overly tight and some students feel confined and bored. They may prefer to create structures of their own; to discover, on their own, the conceptual linkages of a subject; to learn some details incidentally rather than always by teacher design. There is some evidence that bright students tend to achieve better in low-structure rather than in high-structure situations, just as children who are low in general cognitive ability tend to profit most from high structure (Cronbach & Snow, 1977; Hunt, 1975).

Some students do better when they create their own structures for learning.

A class in which there is good accommodation to individual differences is one in which structure is varied and used creatively by the teacher. Unfortunately, some teachers operate fairly consistently in one style or another. Obviously, style is something to be considered in the placement of children with exceptional needs. One important duty of special education teachers and their paraprofessional aides is to come to the assistance of regular teachers in the cases of children who need very intensive, highly structured programs for some period of time. Regular teachers cannot be expected to manage all necessary variations in program structure without assistance, and it is a sign of strength and professionalism when they ask for needed help.

Versatility in Instructional Methods

Various methods of instruction can be used with any student or in almost any classroom. The assumption here is that students differ from one another and from time to time in the methods that are optimal for them; thus, an important aspect of instruction is to provide alternative methods and to introduce the alternatives efficiently. A classroom that is always conducted in the same way for all students is certain to serve some students poorly.

Not all students learn well by the same instructional methods.

Probably the most common of all methods is simple, direct "telling," or lecturing by the teacher, with or without occasional audiovisual adornments.

Other methods leave students on their own to discover information or solve problems. That alternative is practiced not simply to shift the burden; its rationale is that individual discovery incites interest, meaning, and more permanent learning. *Precision teaching* methods created by the applied behavior analysts have had expanding influence in special education. The major principles of precision teaching are the detailed pinpointing of objectives, careful arrangement of the instructional environment, and management of the consequences of each student response. In still another method, *developmental teaching*, the psychological development of students is made the explicit object of education, as in moral development (Kohlberg, 1969). The various teaching methods are described, in part, by Joyce and Weil (1972).

Teachers can become more versatile in instructional methods if given opportunities and help.

We assume that the teacher who is able to use various methods of instruction is in a better position to match with a student's needs and style than the teacher who confines instruction to a single approach. Teachers need not expect to offer all approaches at all times, or even to know each one well. They can expect their partners in special education or fellow staff members to help them acquire skills in the particular options that are needed to meet particular needs.

Some of the methods that can be used in classrooms to meet individual needs are as follows:

1. *Peer or cross-age tutoring*. Individual students teach individual or small groups of students specific subject matter or skills, under conditions established by the teacher.
2. *Inquiry-discovery methods*. These provide opportunities for students to inquire and reach generalizations independently; may or may not include interactions among students; and often emphasize creative or divergent problem solving.
3. *Group investigations*. This method involves cooperative group processes in solving problems or in mutual help on basic educational tasks.
4. *Precision teaching*. Methods of applied behavior analysis are used, such as pinpointing tasks, contingency management, and behavior charting.
5. *Instructional games*. Concepts to be taught are embedded in game situations.
6. *Psychoeducational diagnostic-prescriptive procedures*. The systematic application of assessment devices is used to choose precise next steps in a pre-sequenced curriculum.
7. *Direct instruction*. The teacher "tells" or explains all content with or without correlated visual aids and/or demonstration.
8. *Developmental teaching*. This method is illustrated by direct psychological education for moral development, using moral dilemmas according to cognitive developmental level of students.

The Case of Erick: Results of Assessment

The physician's report on Erick was essentially negative. Erick is in good health. The tests of vision and hearing were negative. No detailed neurological testing was considered to be necessary. The physician shared the concerns of the school staff for the delay in Erick's language development and for his awkwardness and distractibility; the physician asked to be kept informed. Nothing in the physician's report or in other data on Erick's early development was of a nature to predict or explain his school problems.

Erick's plan is a "BCD" type. No etiological data were found to be relevant.

The psychologist reported a low average level of cognitive ability (WISC-R Full Scale IQ of 92) with somewhat lower verbal than performance abilities (Verbal IQ: 86; Performance IQ: 95). The psychologist also reported on classroom observational studies conducted for 20 minutes on each of five days, following procedures described by Deno and Mirkin (1977). Observations focused on *noisemaking, being out of place, unacceptable interpersonal contacts or destructiveness,* and *off-task behavior.* Compared with other children in the classroom who were randomly selected for comparative observations, Erick showed an average amount of noisemaking, twice the average rate for being out of place, only slightly above average rate of unacceptable contacts and disturbances, but eight times the average rates for "off-task" behaviors. This finding fully confirmed the teacher's informal observations.

The special education resource teacher reported general slowness in Erick's language development and specific needs for help in sensitivity to sound similarities (rhyming), and in auditory discrimination of word elements.

The physical education teacher observed Erick and confirmed the informal observation of awkwardness. The problem is considered minor but worth attention by the physical education teacher for some individualized help in gross motor skills.

Needs were pinpointed in several areas.

The classroom was observed to be in good order at most times. Erick seems not to have suffered any stigma in relationships with classmates, but he lacks frequent, cordial interactions. The teacher would need assistance to offer highly structured help to Erick on an individualized basis; hence, a second adult would be welcomed in the classroom to help extend teaching for Erick. Teacher-parent contacts are minimal so far and would need to be developed, assuming that the parents will be engaged in a collaborative program.

It was agreed also by all the professionals that Erick qualified as a handicapped child under the standards of the state, and as a child in need of special education and/or related services.

Contemporary Problem Areas in Assessment

A variety of difficult problems exist in connection with assessment. Some of these problems and possible solutions are considered briefly here.

Discriminatory Testing and Assessment

Testing can be said to be unfairly discriminatory if it fails to measure with validity what it is intended to measure simply because of failure to take into proper account the characteristics of the student. For example, the student may not understand the testing process because of poor hearing or sight, or may not be able to respond adequately, through speech or manual methods, because of a disability. In such cases, test results may be unduly influenced by the handicapping condition and fail to reflect with validity whatever aptitudes or achievements it was intended to measure. The solution to such problems is to use adapted or alternative procedures in testing that do not include the invalidating procedures. For example, a child who has difficulty in speaking may be given a test that requires response by pointing with a hand or finger.

A somewhat similar set of potential problems exists for children who are bilingual or non-English speaking, or whose cultural background is markedly atypical. Tests that assume equal opportunities for the mastery of English may not be appropriate with such children. Again, alternative or adapted techniques are needed. They may include testing by psychologists or teachers who know the child's language or, perhaps, the use of performance rather than verbal assessments.

Always use more than one method in critical aspects of assessment.

School psychologists, speech-language therapists, and other specialists who engage regularly in testing are increasingly sensitive to the problems of discriminatory assessment and often can be helpful in selecting or designing adapted testing procedures. Other special protections against discriminatory testing include the following:

1. Always use more than one method of measuring important aspects of the child's development and performance (e.g., classroom observations, both informal and formal testing, and case history information).
2. Use two or more persons of different backgrounds (multidisciplinary teams) to participate in critical assessments.
3. In the case of non-English speaking and culturally different children it is important to include in the decision-making process someone who can provide a special perspective on the child's background and current life situation.

A test or an assessment procedure may also be adjudged biased if it results in decisions that are influenced unduly by the group or class membership of the individual being tested. In fact, the members of certain groups (e.g., Blacks, females, handicapped persons) are protected legally against decisions that are influenced by membership in those groups. The moral obligations of professionals extend to other groups as well. For example, it is unfair to judge an individual student on the basis of what is believed or observed to be generally true of adolescents, "the deaf," farm boys, Southern Italians, Mormons, or "people who've had a nervous breakdown."

Focus should be on the individual.

To what extent do school personnel tend to be influenced by group membership in decisions on individual pupils? Research results show that factors such as race, sex, physical attractiveness, and socioeconomic status (Ross & Salvia, 1975; Ysseldyke, 1978) sometimes do influence the judgments of teachers. The solution to problems of this kind is simply to discipline oneself not to consider "group rates" or "class membership" in making decisions on individuals. Society permits the use of some classes or group rates in decision making. For example, insurance companies are permitted to charge higher than normal rates for automobile insurance for "young men" and other "high risk" driver groups. In the schools, however, the concepts of fairness require strict attention to variables that characterize or measure the individual. Group membership data, whether valid or invalid, may not be used in decisions on individuals.

Non-discriminatory testing is not necessarily valid testing.

Adapting assessment procedures so that they do not introduce bias on the basis of group membership or make false assumptions about the student's language or cultural background offers no assurance, of course, that the essential purpose of assessment in the schools will be well served. There remains the problem of validity, that is, of being sure that the procedure yields the information that is needed to make an instructional decision.

Jones and Wilderson (1976) commented:

> Inappropriate tests, poorly trained teachers, or irrelevant curriculum and a failure to understand the intersection of cultural differences and learning problems could be as much to blame for the *learning problems* as the characteristics and *deficits* of the children themselves, who typically were labeled emotionally disturbed, learning disabled, or educable mentally retarded, and educated in self-contained special classes. (pp. 1–2)

Dabney (1976) put the problem as follows:

> Many children who have previously been segregated in special education classrooms are not mentally retarded, nor are they suffering from neurological or other physiological pathology. Their behaviors are generally perceived as demonstrating deficits or shortcomings which derive from physical, emotional, family or community pathologies. Seldom are the behaviors perceived as having arisen as the child struggled to demonstrate capability for autonomy and control. The burden of this struggle falls more heavily upon poor children than upon children of the middle classes and more heavily upon nonwhite than upon white children. For these children the school serves as an instrument of *negative credentialism* . . . certifying the children of the poor as socially inferior. (pp. 109–110)

Assess the child directly on the task to be learned; use criterion-referenced assessment.

The problems of discriminatory assessment are complex indeed. Perhaps the most useful approach is to make very few indirect assessments and predictions and to proceed directly to assessments in the domain of instruction. For example, make fewer predictions about reading achievement or assessments of "capacity" for reading and go directly to diagnosing how well the child actually reads; or, give deaf persons a chance to learn a trade and then assess directly how well they are doing rather than using tests in advance to select or reject candidates for training on the basis of predicted performance.

Minimum Competency Testing

Most states require the periodic testing of elementary and secondary students in basic skill areas; reading, mathematics, and writing are the most commonly mandated areas for testing. Practices vary in the compulsory testing of handicapped students. Sometimes all handicapped students are exempt from the testing requirements. In other states or school districts, testing is required for all groups except students who are mentally retarded. In still other places, decisions are made individually for each student (Wiederholt & Stubbs, 1980). Special treatment for handicapped students in testing programs can be appropriate, but it also can be unnecessarily demeaning.

Minimum competency testing may imply uniformity in school programs.

The difficulties mount when the results of competency testing are used to control grade promotion, high school graduation, or the issuance of regular high school diplomas. Such uses of testing occur periodically; note, for example, the wave of "minimum" competency testing programs beginning in the late 1970's. One assumption of minimum competency testing programs is that all students should meet uniform standards, and it is but a short step from that position to requiring students to be in uniform curriculums. Obviously, this approach to testing and teaching is greatly in conflict with policies that require carefully individualized assessment and instructional programs for exceptional students.

By 1978, 31 states had established minimum competency requirements either for high school graduation or for promotion from lower to higher grades. The Florida test, for example, was administered on October 1, 1977, to all high school juniors, including those who were deaf (N = 126) and those who were hard of hearing (N = 49). The communications subtest was passed by 47% of deaf students and 65% of hard of hearing students. For the mathematics subtest, the respective percentages were 18 and 29. Of a total of 479 juniors classed as educable mentally retarded, only 6% passed the communications test and 1% passed the math test. With the bulk of the United States installing competency tests, close attention needs to be paid to the relationship between IEP goals and objectives and the criteria written into grade promotion and high school graduation competency standards (Safer, 1980).

Emphasis on the teaching of basic skills is agreed upon to be important.

On the surface there are real and difficult conflicts between the minimum competency testing movement and the requirement that programs for exceptional children be individualized. Fundamentally, however, both these movements represent the concern that all children master the basic tool subjects of the school curriculum. On this there need be no disagreement. Most of the work of special educators is directed to teaching basic skills. Indeed, most of the growth of special education in the 1970's and 1980's represents an onslaught against the neglect of some children in the teaching of basic skills. Hopefully, the minimum competency testing movement will be used to improve instruction, which requires an understanding of human differences, rather than as a crude means of forcing uniformity upon teaching and expected learning outcomes.

Intelligence Testing

One especially troublesome aspect of assessment is intelligence testing. Assessment and classification have moral, ethical, and legal implications. These processes are intended to serve children and their families positively, but too often they do not. Many minority group parents have felt that their children have been misjudged, slandered, and misplaced in school programs as a result of biased IQ testing procedures. Because relatively high proportions of minority group children have tended to be classified as mentally retarded, the claims of assessment bias against minority group children have immediate, if indirect, importance for special education.

The famous case of *Larry P.* in a California lawsuit (*Larry P.* v. *Riles*, 1972) resulted in an injunction limiting the use of intelligence tests with minority group children. The case concerned a finding that several Black children had been inappropriately classified as mentally retarded on the basis of intelligence tests results. Following this case, a reduction occurred in the use of individual intelligence tests and in the numbers of children who were classified as "educable mentally retarded" in California. In a period of about six years following the *Larry P.* decision, enrollments in classes for educable mentally retarded students in California were reduced virtually by half. The *Larry P.* case was reaffirmed through one level of appeal in 1980 and thus has had long-term significant effects not only in California but, also, throughout the nation (Lambert, 1981).

In a case similar to that of *Larry P.*, an exactly opposite conclusion was reached in an Illinois court in 1980. Again, plaintiffs claimed that the IQ testing used for placement of children in special classes for the mentally retarded was unfairly discriminatory against minority children. The judge reviewed the tests, including the Wechsler Intelligence Scale for Children (WISC), in great detail and even printed test items in the court record. He made personal judgments on whether each item seemed to be discriminatory on racial grounds. Opinions of expert witnesses on the test items were considered, but the judge finally made the decision on the items and IQ tests as a whole. In this case the summary judgment was that the tests, as used by professionals, were not unfairly discriminatory (PASE, 1980).

The courts are not yet clear on the permissible uses of intelligence tests for classification purposes.

Anne Cleary, 1980 chair of the American Psychological Association Committee on Psychological Tests and Assessment, saw the problems of IQ testing for special education placement as centered more on the classes than on the testing.

> The problem is the special education classes. There would be no controversy about testing if kids blossomed when they were put into special education classes. But rightly or wrongly, the educational treatment is perceived by many parents as detrimental to their children. If it is detrimental, it's clear we ought to stop

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"Past research and development on aptitude and intelligence have led to technological advances which have been designed to serve established patterns of schooling. However, at the present time, the old technology may no longer be sufficient to serve new values and new conceptions of the educational process. The realization of this need for improvement has resulted in stop-gap measures such as the suspension of standardized intelligence testing." (Glaser, 1979, p. 10)

The classification problem sometimes reflects a negative evaluation of special classes.

having special education classes. It's as simple as that. If it's not detrimental, we should show parents that. (Cleary, as quoted in *APA Monitor,* 1980)

An illuminating example of how a group of gifted Black children may have been misjudged by prevailing IQ testing procedures was provided by Baldwin (1977). In 1966, a group of 55 Black children who were then completing the fourth grade were selected for a "gifted" class, even though their mean IQ on the Otis Intelligence Test was only 112. At that time (end of fourth grade) they were at grade level (average 4.93) in paragraph meaning on the Stanford Achievement Test. After one year, their group mean on paragraph meaning was 7.85. Very rapid gains were shown on other measures as well. All 21 of the children who were followed over time entered college and some were making distinguished records. Baldwin said, "The point about using standardized tests . . . is not that *they will not predict* achievement. . . . Rather, the tests can seriously underestimate potential or intellectual ability to process information" (p. 621). In other words, if only one prediction (regression) equation and one means of identifying gifted students had been used for all students, it is quite likely that these Black children would have been seriously underestimated and neglected.

IQ tests are moderately accurate in the prediction of the academic achievements of children. The correlation coefficients between IQ's and achievement in basic skills in single age or grade groups tend to cluster around .50 to .60. These are statistically significant correlations, but they are very little better than chance for most purposes. More significant in a practical sense is that IQ tests tend not to be very useful in helping teachers to decide on treatments or instructional approaches that are likely to benefit individual pupils.

IQ tests do not aid in selecting alternatives.

IQ tests tend to predict achievement moderately well in almost all instructional situations but not to be useful in choosing among such situations. For example, the tests may predict with some accuracy how a bright student may do in various college programs, but the prediction is of little use in helping the student to choose which program to enter. Similarly, an IQ test may predict that a child will achieve poorly in academic subjects in school, but it does not indicate that the child will do better in a segregated setting (special class).

Lately, several influences have broken the rigid models of past notions about IQ's, capacity for learning, or what it is reasonable to "expect" of learners. Scholars, reexamining studies on the nature-nurture controversy, have helped to create a much more open idea of nurturance of intelligence (Hunt, 1961). Studies in international education have helped to clarify the great influence of social forces in the achievements of individual human beings (Halsey, 1961). Minority groups have been militant in demanding a more guarded use of general intelligence tests as a basis for creating expectancies and classification systems.

B. F. Skinner argued that we have permitted the adjective *intelligent,* as in intelligent behavior, to become the noun *intelligence.* Bijou and his colleagues, who have urged the educational community to adopt the viewpoint

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On Binet's Test

"Accepting the goal of maximizing the effectiveness of education for all *children and youth, we must face up to the problem that we have long acknowledged but seldom dealt with effectively—the problem of providing for each individual the educational treatment that will be most effective in developing that person's potential. A good measure of scholastic aptitude is not automatically a good guide to the optimal educational treatment. Binet's test, like others used in education, must be judged in terms of its ability to facilitate constructive adaptations of educational programs for individuals. This is the challenge for the next 70 years." (Thorndike, 1975, p. 7)*

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of the applied behavior analyst, have argued that "a retarded individual is one who has a limited repertory of behavior evolving from interactions with his environmental contacts which constitute his history" (Bijou, 1963). In this framework a concept of general capacity seems to be superfluous. Lindsley (1964) took what may be the ultimate position when he wrote:

Behavior and environment are intertwined.

> Children are not retarded, only their behavior in average environments is sometimes retarded. In fact, it is modern science's ability to design suitable environments for these children that is retarded. (As cited in Bijou, 1963, p. 62)

Behaviorists such as Bijou and Lindsley, like religious missionaries, believe that behavior can be changed if the response is defined carefully and the environment is controlled to influence the probabilities of response; they make little reference to concepts of fixed capacity.

The sources of new viewpoints on IQ's and human capacity are many, but suffice it to say that our views are much less fixed now than they were earlier. What may be expected of a person is seen, in important part, to be a function of culture and a particular environmental history. It is increasingly appreciated also that "intelligent" behavior has many noncognitive determinants.

In summary, one can say simply that there is no such thing as *the capacity* of a child for learning.[2] One can say that children have many different capacities for leaning or that it is reasonable to expect different rates of learning from children depending on how they are taught and what their other life experiences are. Children in ancient Rome learned Latin at age 2. So it is with complex, culturally related learning. What can be expected of children must take account of the characteristics of both the children and their environments. The orientation required is an ecological one.

There is no such thing as the capacity of a child for learning.

Children and youth all over the nation are being taught and are learning at levels far above those "expected" of them only a few years ago according to their IQ's. Nowhere is this more obvious than in the burgeoning new centers for severely handicapped persons. There is reason to reject much of what has been said about children's "capacities" and to accept, instead, a greater responsibility for arranging environments that make positive differences in their lives.

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[2] This, of course, throws into serious question any assessments that rely on a measure of "discrepancy" between capacity to learn and actual achievement. More about this is found in the chapter on learning disabilities, because such "discrepancies" play a major part in several definitions of learning disability.

Assessment that is related to instruction is more useful.

IQ tests have been much over-used in the schools. They are not very useful in a context in which no students may be selected for or rejected from school and in which each student must be served "appropriately." The attention of teachers, principals, counselors, school psychologists, and parents is shifting from IQ tests to other assessment procedures that are more directly tied to curriculum and that offer more promise for providing direction for enhancing the educational experiences of individual students.

Criterion-Referenced Versus Norm-Referenced Testing

Traditional norm-referenced testing in the schools is used to evaluate individual performance against the results or norms for some group. For example: John is said to be performing at the 50th percentile as compared with his fourth grade classmates; Mary is said to score at the level of average third graders at midyear (grade score 3.5); or Fred is said to score one standard deviation above the mean for his age group on national norms. Such information tells whether a child is above or below average for age or for grade group, but it does not say whether a student has mastered specific content or skills or is ready to proceed to the next stages of instruction. Norm-referenced testing usually is oriented to judging the general progress of students and to making predictions about future achievements. It has limited use in planning instruction for individuals.

Criterion-referenced tests are probably best thought of as domain-referenced.

A contrasting technique is that of criterion-referenced or domain-referenced testing (sometimes known also as objectives-referenced). It focuses on testing a student's performance in relation to a fixed standard in a well defined domain of content or skill. For example, the question may be: Does the child know the whole number combinations (addition, subtraction, and multiplication) up to 10's? Using a domain-referenced test, the answer to this question can be provided with precision and without reference to how any norm group performs. No reference is made to grade levels, percentiles, or standard scores; instead, the testing specifies precisely how the student performs in the specific content or skill area. It permits interpretation of a student's position in relation to a planned curriculum and, thus, is useful in planning individualized instruction. Criterion-referenced assessment is best used as an integral part of instruction (Glaser, 1963).

Although teachers often find it necessary to develop their own criterion-referenced tests, help is provided increasingly by commercial producers who have developed materials that are organized by specific objectives and include objectives-oriented or criterion-referenced tests.

Mehrens and Ebel (1979) described the difference between norm-referenced and criterion-referenced testing this way:

> If we interpret a score of an individual by comparing his score to those of other individuals (called a norm group) this would be norm-referencing. If we interpret a person's performance by comparing it to some specified behavioral criterion of proficiency, this would be criterion-referencing. To polarize the distinction, we could say that the focus of a normative score is on how many of Johnny's peers do not perform (score) as well as he does; the focus of a criterion-referenced score is on what it is that Johnny can do. Of course we can, and often do, interpret a single test score both ways. In norm-referencing we might make a statement that "Johnny did better than 80 percent of the students on addition of whole numbers." In criterion-referencing we might say that "Johnny got 70 percent of the items correct in a test on addition of whole numbers." Usually we would add further "meaning" to this statement by stating whether or not we thought 70 percent was inadequate, minimally adequate, excellent, or whatever. (pp. 2–3)

As testing is made a part of the day-by-day instruction that accommodates to individual needs, it seems likely that much more testing will be of the criterion-, domain-, or objectives-referenced kind. Occasionally, however, it is useful to administer norm-referenced tests so that individuals can compare their rates of development with those of their peers. The information provided in such social contexts helps one to judge overall development, relative strengths and weaknesses, and likely future development in special fields. It is useful in making long-range educational and career plans.

Testing should be integrated with instruction.

Grading for Exceptional Students

One of the challenging problems associated with assessment, progress evaluation, and the mainstreaming of exceptional students is grading. If grading is based solely on comparisons of achievement among all students in a class, it is all too easy and common for gifted students to receive high grades for minimal efforts. On the other hand, students who have difficulties in academics may be making very good progress for themselves, but they receive consistently poor grades when they are judged in terms of general, comparative classroom achievements. The solution to such problems is to offer grades mainly on the basis of current progress in meeting individual goals and objectives. Only when every student is made sensitive to individual progress do grades serve to motivate everyone to make strong, consistent efforts for improvement.

Every student's grades should reflect current progress.

Occasionally, however, students and their parents need information on their rates of progress in comparison with age and class groups. For example, students need honest and clear information on how their educational progress compares with that of applicants admitted to professional schools (law, teaching, ministry, medicine, etc.). In general, exceptional students should be expected to take the same standardized tests as other students, with necessary adaptations for sensory limitations or other handicapping conditions.

Another feature of a good grading system is that it reflects, in part, how productive each student is in achieving group goals. Our society stresses individual achievements but, in reality, individuals usually achieve very little unless they are also able to cooperate with others.

Deutsch (1979) asserted:

> *An ideal grading system* would foster the view among students that they have a positive interest in the educational attainments of one another. Second, instead of emphasizing comparative evaluations, such a system would provide individualized, particularistic feedback aimed at helping individual students and groups of students to function effectively both as individuals and as groups in achieving educational objectives.... Third, when prerequisites of specific skills and knowledge were necessary for students to engage in a course of study, criterion-referenced rather than norm-referenced tests would be developed and employed to assess the specific skills and knowledge. Similarly, criterion-referenced tests rather than norm-referenced tests would be used when it was necessary to certify the level of a student's educational attainments in a given area. (p. 400)

The principal can help establish appropriate procedures.

Sometimes questions arise over who should grade exceptional students when both regular and special teachers are involved. If the teachers do not work out a solution, the principal should decide on the procedure to be used. A guiding rule is that the grade should be given by the same teacher who grades the other students in the classroom for that subject or grade level, and that the grading teacher should take into account the views of other teachers who work with the student on particular subjects.

Characteristics of an Adequate Program of Assessment

To provide a summary and perspective, a brief list of characteristics of a school that has an adequate assessment program is presented here.

Coordination is critical.

1. The staff of the school has been organized to study exceptional students and to provide appropriate programs for most such students using its own resources. This organization requires coordination according to carefully developed plans of regular teachers, special education teachers, the school principal, and parents. For purposes of assessment and instruction, at least 80% of exceptional students can now be served by within-building or permanent staff members in the school. That proportion promises to increase rapidly toward 100% as teachers become more accomplished and as assessment procedures are improved.
2. Itinerant specialists (school psychologists, speech-language therapists, educational audiologists, special education consultants) who visit the building provide ongoing consultation and training for the school staff, as well as direct services to students, on topics related to assessment processes and instructional planning.
3. Assessment procedures are matched very closely to the specific instruction being received by each student, thus assuring each student, teacher, and parent that there is a rational system for detecting individual progress in meeting individualized objectives.

4. All parents are assisted in understanding the assessment system used in the school, and parents of exceptional students are given added help in understanding the specialized assessments made of their children.
5. Teachers expect assessments of instructional problems to include in-class observations of themselves, the students, and their physical environment as part of the plan of actual study.
6. Screening procedures for exceptionality are regularly and uniformly applied to all children in the school service area, and followup diagnostic and treatment services are available to all who need them without limitation for reason of family resources.

All children are the beneficiaries of regular screening.

7. The school program of assessments has been planned carefully in conjunction with health and welfare agencies of the community and is part of a total coordinated community program of services for all children.

Prevailing Versus Preferred Practices

This chapter has provided a brief overview of processes for the assessment of exceptional children and school programs for the purpose of achieving a good match between the two. The assumption is that the processes should be decentralized; that is, they should be out in the schools where teachers and students are located and where programs will be delivered. A brief summary of some of the main points of the discussion is provided by contrasting prevailing and preferred practices.

Assessment is decentralized.

Prevailing Practices	Preferred Practices
1. Children tend to be screened into and labeled by various categories of exceptionality.	1. Screening is conducted to identify students who require diagnostic study, but without labels, especially labels of a behavioral character.
2. Educational diagnosis consists mainly of classification in terms of exceptionality categories.	2. Educational diagnosis is strictly oriented to the planning of instruction.
3. Educational diagnosis refers only to the child.	3. Educational diagnosis refers to both the child and the program.
4. Assessment tools and techniques generally are not modified for use with handicapped students or students with minority group backgrounds.	4. Assessment procedures and interpretations are carefully attuned to the particular needs of each person to be nondiscriminatory and maximally useful in planning instruction.

Prevailing Practices	Preferred Practices
5. Specialized assessments are conducted mainly by psychologists, special educators, or other specialists.	5. Most assessments, even those of specialized character, are conducted by teams including both regular teachers and specialists.
6. Handicapped students tend to withdraw from school or to be discouraged from attending school beyond compulsory age limits.	6. Provisions are made for the appropriate education of handicapped students at all levels, including high schools, vocational schools, institutions of higher education, and lifelong learning centers.

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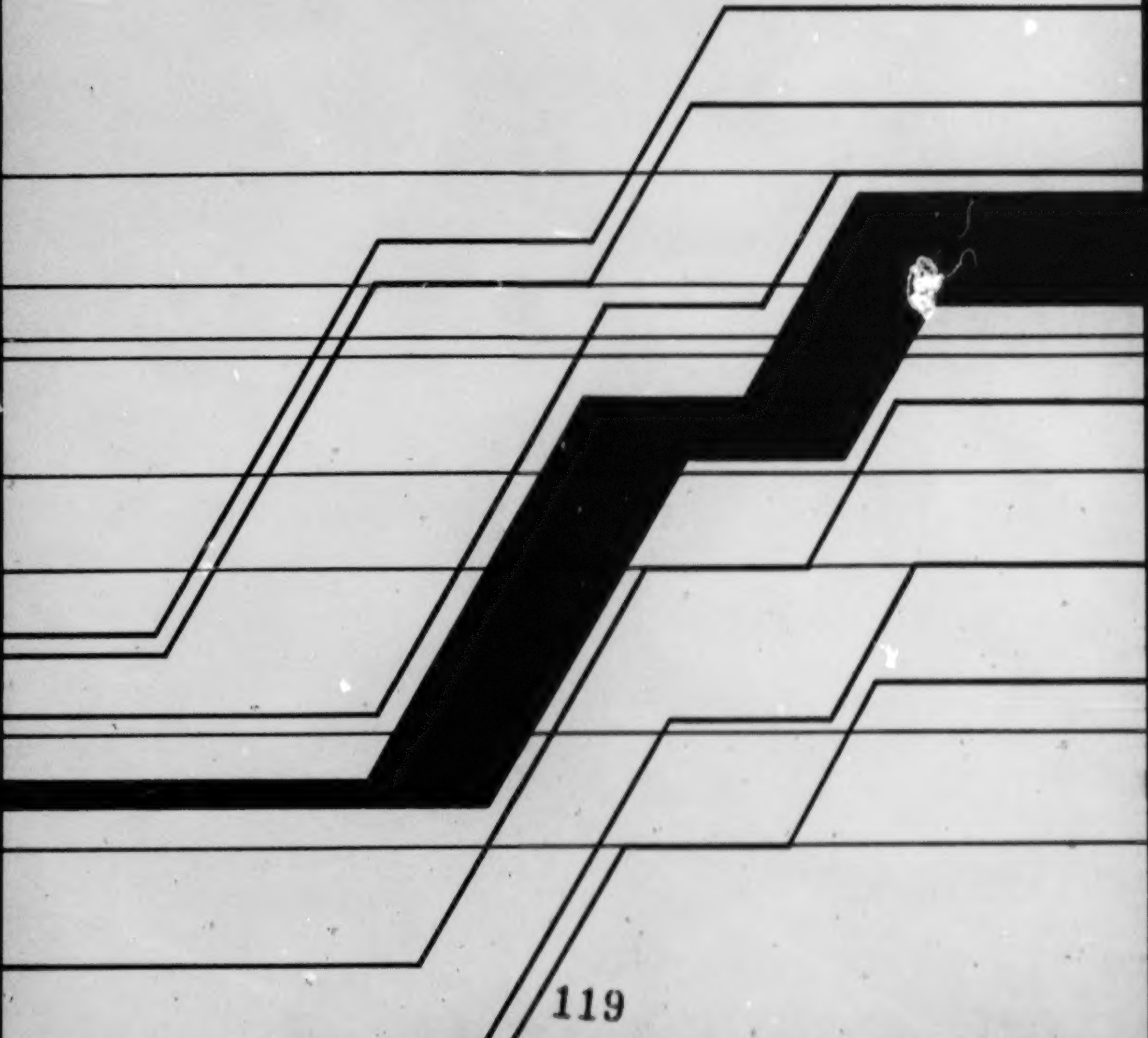
CHAPTER 4

Parent-Teacher Instructional Planning



Chapter Outline

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Overview

Instructional planning and implementation are at the heart of education. Parents are partners with teachers; they have contributions to make both in planning and in implementation. When relevant data on the student and the environments have been gathered, it is time to integrate the information and to plan. This step requires a conference. Sometimes several teachers and other specialists from the schools will participate. Parents may choose to have a counselor present to advise and assist them.

Teachers and parents are now partners in planning and instruction.

Cultural Imperatives Versus Cultural Electives[1]

In considering educational plans, parents and teachers must agree on a distinction between subject matters and skills that are required of all students (the cultural imperatives) and those that are deemed less uniformly essential (the cultural electives). Today there are some areas of learning that are virtually as essential for human beings as adequate vitamins. These *imperatives* are the basics of education, the tools of the culture, without which a person is confined to fundamental ignorance and limited choice. For the United States and Canada in the late twentieth century, imperatives by consensus, we think, would include these five:

1. *Language:* speaking, listening, comprehending, reading, and writing for everyday personal and social needs.
2. *Mathematics:* at least those basic skills required in the marketplace and for daily life.
3. *Health and safety:* the knowledge of self-care, health, and protection for community living, if possible.
4. *Social skills:* for acceptable behavior in citizenship and in group life (nondestructive, cooperative, etc.).
5. *Career education:* preparation for employment, an economically useful life, and other life roles.

There is broad consensus about the importance of certain curricular areas.

A good start on these imperatives is provided during early childhood in most homes. As children enter the schools, a coalition of home and school is formed to further develop these essential areas. Some children have difficulty with them, but help must be given to all, and it must be persistent because these areas are so essential to basic human awareness, growth, and survival.

The *electives* are different. Our society does not require all students to take up the flute or to study the higher branches of mathematics, poetry, or the use of the crosscut saw. We are remarkably tolerant of people's lifelong ineptitude in many such skill areas. However, schooling should help students to explore and catch a vision of the range of electives in our society. Students are free to move in or out of elective areas of the curriculum. Parents and teachers should share their views on priorities between and among imperatives and electives.

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[1] These two terms were first used by George Stoddard in his book *The Dual Progress Plan* (1961).

Compulsory Versus Noncompulsory Education

Another distinction in considering educational planning is between periods of compulsory and noncompulsory education (OECD, 1974). In most states children are required to go to school between the ages of about 6 and 15. During that period there are no options regarding attendance, either for students or for schools. Either state-approved private schools or free public schools may be used. Private schools may set their own admission and demission criteria. Public schools, on the other hand, have a *contract* with each student of school age to offer an appropriate program. In the case of breach of contract (failure to provide a suitable program), school board members and other school officials face liability issues.

The logic of school placement changes at the precompulsory and postcompulsory levels.

In the earlier precompulsory and at the more advanced stages of postcompulsory education, the rules differ considerably. At these levels (before age 6 and beyond age 16 in most states) students are not required to attend school. Yet many exceptional conditions are aggravated by failure to use the precompulsory and postcompulsory years effectively for education. And, although students have *rights* to education that extend into the postcompulsory age level (usually to age 21), they do not have a right to enter *any* educational institution or *any* program of their own choice. Their right to education guarantees them the right to a place and an appropriate program in public schools, at least through high school graduation or to age 21 (whichever comes first), but increasingly they face the realities of the sorting processes as advanced training programs and employers come to the forefront.

Parents and teachers have impressed many communities with the values of free preschool programs that ready exceptional children for the years in which education is compulsory for all. That is a growing trend, though not yet recognized as a societal imperative. Postcompulsory education, too, is increasingly free and accessible to exceptional persons by way of federal and state vocational rehabilitation agencies.

Programs at the postcompulsory age levels tend to be specialized and elective. They tend to act strongly as "sorters." For example, students get into and stay in welding classes, medical schools, teacher training programs, or busi-

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"For most of this century, public schools in the United States have been viewed as carrying out five important functions: socialization, *a unifying and disciplinary force in a society of diverse origins;* sorting, *identifying people's future socioeconomic roles;* custody, *the child-sitting function;* knowledge and skill training, *developing a literate population with at least a minimum of job-related skills; and encouragement of such individual attributes as* creativity and self-reliance." *(Averch et al., 1974, p. 73)*

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ness schools only to the extent that they make good progress and appear likely to be certifiable or suitable for employment following the prescribed period of schooling. The schools offering those electives increasingly reserve their right to make selection and rejection decisions. Because responsibilities at advanced levels of training often include the standards of the trades and professions, as well as their utility in the public service, student desires and needs are not the only consideration in decision processes.

Much work is yet required to assure rights to education.

There are many problems yet to be solved on behalf of exceptional students at the precompulsory and postcompulsory levels: (a) making sure that they have appropriate opportunities for education both before and during the full period of their *rights;* (b) making sure that they are not denied opportunities for education in vocational and professional schools on the basis of faulty information or clear failure to provide feasible training programs and job modifications; (c) making sure that special needs students have the fullest opportunities, compatible with their interests and abilities, for advanced liberal education and for vocational and professional preparation. To achieve these objectives calls for vigorous joint advocacy by parents, teachers, and administrators.

Due Process Safeguards

In the process of planning educational programs it is possible that serious disagreements may develop or events may occur about which the child, parents, teacher, or others feel that their interests or rights have been violated. Increasingly, safeguards are being built into regular procedures in order to assure "fairness" and to avoid unnecessary formal confrontations.

Procedures in educational planning must be "fair."

Under law and court decisions, safeguards are made available to parents and children in any matter concerning an exceptional child's identification, evaluation, or enrollment in an educational program. This means that:

1. Prior notice is given to parents before any special educational diagnoses are performed.
2. Prior notice is given to parents before any change in the child's program is made such as enrollment in a special program or the involvement of a resource teacher in the child's instruction.
3. Parents have access to school records relevant to their child's school situation.
4. A "surrogate parent" may be designated to serve on behalf of a child who is a ward of the state or whose parents are unknown or unavailable.

If disagreements develop about any matter concerning the evaluation of or programming for a child, school districts are obligated to provide impartial due process hearings. In any such hearings, the parent has a right to be accompanied by a lawyer or other counselor, a right to present evidence, to confront, compel, and cross-examine witnesses, and to obtain a transcript of the hearing or a written decision by the hearing officer. If dissatisfied with the decision of the hearing officer, the parents have a right to appeal to their state educational agency and, if still dissatisfied, to the courts.

Teachers should be assisted in making appeals when they feel strongly about disservice to a student.

There are two parties to each hearing and appeal. School teachers and officials might also seek formal hearings or undertake appeals when they feel that the emerging plan for any child is inappropriate. It is a professional obligation of teachers and other professionals to undertake formal action on behalf of a child or themselves when they believe a serious disservice might otherwise be involved. Teachers and other school officials should seek counsel, present evidence, and act in other such matters just as parents and others do. Procedures should be regularized in school districts and through professional associations to provide counsel to school staff members who undertake due process hearings and appeals. Most important, parent-teacher partnerships that work can help minimize the incidence of angry confrontations that lead to legal actions.

Teacher–Parent Interaction

Until recently, few teachers received preparation in relating to parents. Also, most parents knew little more about elementary and secondary schools than what they remembered from being pupils themselves. Their role as parents was a passive one in school affairs. However, in recent years parents are more informed and their role grows more active. They take direct part in the daily activities of the schools in the following ways:

More parents are in the schools these days and for a wider variety of purposes.

First, parents of exceptional children participate in screening, in assessment, and in designing individualized education programs for their children. Second, schools employ more parents, particularly in paraprofessional aide and assistant positions, thus bringing them into daily contact with teachers and pupils. Third, schools are the focus of the volunteer activities of many community organizations. These range from broad interests, like the good citizenship stimulation of veterans' organizations, to the specific program-directed work of parent groups such as the National Association for Retarded Citizens and the United Cerebral Palsy Association. Finally, parents help guide school programs conducted for their children. For example, parents of children in Title I programs[2] and in early education programs are on local advisory committees.

Teachers, too, are called on to take several different roles in relation to parents. They:

1. Supervise parents who are employed or volunteer to assist teachers.
2. Evaluate the educational progress of pupils and report and interpret the evaluation to parents.

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[2] Title I of the Elementary and Secondary Education Act provides for programs serving disadvantaged children. This Act was changed in major ways by Congress in 1981. Programs are expected to continue in the schools in approximately the same form as in earlier years, but at a reduced level.

3. Participate with parents in planning and decision making regarding school policies and practices.
4. Consult with parents about the problems of and with their children.
5. In effect, *become* the child's parent when it is necessary and proper. The teacher role under the doctrine of *in loco parentis* has been eroding in recent years in a legal sense, but remains strong in less formal ways.
6. Explain the work of the schools to parents in general as well as to other citizens in the school area whose taxes support the school.
7. Take part with parents in organizing and conducting general community improvement and maintenance activities.

Teacher-parent communication is often difficult for both.

Each role carries strains for teachers, even after the best of professional preparation. Many roles are relatively new. Moreover, not all teachers believe that all the roles are appropriate, and they feel that teachers should not accept responsibility for them. In addition, the way each of the seven types of teacher-parent interaction takes place (if it does) is conditioned by whether the parent has one or more exceptional children and whether the local school has adequate staff, facilities, materials, and other resources for both regular and special education. Some parents are deeply distrustful of schools because their children have not been accepted or learned acceptably. In such cases, interactions with parents can be difficult. Further complicating the whole matter is the general tendency for the parent-teacher relationship to be with only one parent—the mother.

Parents of obviously exceptional children usually receive assistance at preschool levels.

Some parents recognize the help of psychologists, physicians, social workers, and other parents in confronting problems in the early years. For example, severely and profoundly impaired (SPI) children and those with distinct conditions such as blindness or deafness usually are identified very early in life. Parents of these children often face critical problems in securing an adequate diagnosis and in developing their own understanding of the child. Other challenges common to these parents include securing developmental help for the child, managing health and home crises, helping siblings in making accommodations to the handicapped child, interpreting the child's problem to relatives, friends, and neighbors, and arranging respite care so that parents can have occasional bits of "time off."

For the larger numbers of exceptional children, those with adjustment, language, learning, and behavior problems, identification takes place only after they start to school. Teachers are then the key figures in working out interpretations and plans with parents. Because the exceptionality was unnoticed or only suspected in early years, it is often something of a shock to parents to face the challenge of dealing with a learning problem, a school adjustment problem, or giftedness.

What Parents Hope for from Teachers

Parents make their aspirations for parent-teacher collaboration known in a variety of ways—through group policy expressions, individual statements of concern, and publications. The following advice from one parent provides important leads (Gorham, 1975). Although the focus was on handicapped children, many of the comments and accompanying suggestions apply to gifted children as well. Indeed they apply to all children and parents on those occasions when challenging developmental problems occur.

Interspersed with the quoted comments are suggestions for implementing Gorham's requests. Developed from the expanding professional literature on parent-teacher interactions, they are applicable particularly to teachers as they assume more and more the centrally responsible position in the planning of instruction for exceptional pupils (Kappelman & Ackerman, 1977; Kroth & Scholl, 1978; Seligman, 1979; Stewart, 1978; Turnbull & Turnbull, 1978).

Assessment of Needs

Gorham's first request concerns assessing the child's educational and related needs:

Parents should not be routinely excluded, even from testing situations.

> Let the parent be involved every step of the way. The dialogue established may be the most important thing you accomplish. If the parent's presence is an obstacle to testing because the child will not "cooperate" in his presence, the setup should include a complete review of the testing procedure with the parent. (p. 523)

Note the parents' assumption that the teacher has something to say about whether the parent is involved, as well as about the testing and where and how it is done. Parents need to know that a professionally prepared teacher is in charge of the education of their child, just as they would want a professional physician to be responsible for the health of their child.

The teacher is usually in the best position to communicate with parents with credibility.

The teacher is the best person for such a mediating and arranging role for three reasons. First, parents will want to have direct and final recourse to the teacher, and they should see the teacher as having central control over what happens with their child in school. Second, the teacher usually best knows the child, the parents, and other professionals in the situation; thus, the teacher is in the logical position to assert generalship. Third, the teacher is the person who will have to live with and use the results of consultations and assessments and who, finally, will be accountable for the child's educational progress. For all these reasons, it is correct for parents to see the teacher as holding a key role in all matters relating to the child's schooling.

A Realistic Management Plan

> Make a realistic management plan part of the assessment outcome. Give the parents suggestions for how to live with the problem on a day to day basis, considering the needs of the child, the capacities of the family, and the resources of the community. Let the parents know that you will suggest modifications in any aspect of the management plan that does not work. (p. 523)

Three things are basic to an effective management plan. First, it must be realistic. It must deal with the problems uncovered in the assessment, and it must be workable—not an unobtainable ideal. Second, the parents must be involved in making the plan, implementing it, determining whether or not it is working, and helping to make needed modifications. Third, communication concerning the plan must be a two-way street. The teacher keeps the parents informed about progress and vice-versa.

Communication is a two-way street.

Knowledge of Community Resources

> Inform yourself about community resources. Give the parents advice on how to go about getting what they need. Steer them to the local parents organization. (p. 523)

Today, almost every exceptional condition is represented by an association in which parents, professional persons, and other public spirited citizens participate. Some organizations include several exceptionalities (e.g., speech, hearing, and crippling conditions). Sometimes more than one organization deals with the same condition. It is not a simple matter for parents (or teachers, for that matter) to determine which of these groups might be most useful for them. Usually, guidance is available from supervisors of special education programs or other staff members, such as school social workers or psychologists.

Direct familiarization with local groups is best for both teachers and parents. A teacher looking for resources for a gifted child, for example, called an organization that conducted Saturday morning painting lessons for elementary school pupils who were recommended because they showed potential talent. The contact led to a similar program for budding writers.

Teachers with direct knowledge of community resources are particularly helpful to parents.

The Parent as a Member of the Team

> Make the parent a team member in the actual diagnosis, treatment, or educational procedures. It will give you a chance to observe how the parent and child interact. (p. 523)

Parent and teacher should have the opportunity to observe each other interact with the child. The more the parents are made partners with the teacher and other professionals, the smoother and more consistent is the delivery of instruction to the child. Parent participation furnishes added feedback for the teacher, as well as a source of new ideas. In turn, the parents have opportunities to learn how the teacher works. They may adapt what they observe in what they do with their children at home.

Watching others work with a child can yield important insights.

Veteran teachers sometimes say they were taught to discourage parents from helping their children at home with schoolwork. That advice grew out of concern that over-eager mothers and fathers might push too hard or teach in ways that conflicted with the school approach. Today, however, there is good reason to believe that most parents, with hints from teachers, can take an active and effective part in the encouragement and guidance of their children's instruction.

In the early childhood years, before formal schooling begins, coping skills essential for education, as well as for cognitive growth, can be fostered or inhibited in children by what parents do and how they do it. Parents who ask how they can help prepare a young child for school can be assured that there are many positive moves they can make. The following principles should guide parent efforts from the earliest years:

- Talk to the child. Give sufficient direct attention, through occasional eye-to-eye contact and actual touch, so that the child is fully aware of being the target of the conversation.
- Encourage responses from the child, especially those that indicate growth in understanding new words and ideas. Help expand the child's vocabulary.
- Allow the child as much freedom of movement in the house as safety will allow. Encourage exploration.
- Respond when the child seeks attention or help, even if it is sometimes inconvenient. Encourage the child to initiate interaction, and allow the child to take the lead from time to time.

Homework is a good idea—when carefully planned.

Parents may also be encouraged to try teaching their school-age children at home. There is increasing evidence that a child's educational progress is accelerated when teachers and parents work together in close partnership. This rediscovery of "homework" is at a much more advanced stage. Homework in its early form consisted of practice, study, and writing assignments, with parental supervision limited to making sure that the child spent time on the assignment. Now it is more than that. It is individualized, and it calls for active parental involvement as well as supervision. Often, it calls for increased parental monitoring of their own behavior, too, to increase their contribution to the child's educational stability, improved concentration, or acceptable social behavior.

If they can relax and work with the child on interesting tasks for sensible periods of time, parents can be very effective in complementing the teacher's efforts. When parents show they would like to try, it is good to set up some homework with which they can help. Keep in mind that short time periods, specific directions, and interesting tasks will tend to produce success; and that can lead to more success.

Avoid professional jargon in all reports and conferences.

Clear, Understandable Reports

> Write your reports in clear and understandable language. Professional terminology is a useful shortcut for your own notes, and you can always use it in communication with others of your discipline. But in situations involving the parent it becomes an obstacle to understanding. (p. 523)

Parental Access to Reports

Gorham recommended that, from the outset, teachers let parents know that they are welcome to see and to have copies of the work their child does, copies of the teacher's written comments on the work, and copies of any reports prepared or received about the child. The teacher should tell the diagnostician, counselor, school psychologist, and anyone else who gives reports on the child that he or she expects to receive them in that spirit of helpful openness. There will be occasions, perhaps, when that point of view will present difficulties. These will have to be worked out with the other professionals involved. Contemporary codes of confidentiality, laws, and court decisions, however, are on the side of the "open" position just stated.

Take the initiative in giving school reports to parents.

Select reports that should be part of a family's records, in your judgment.

> Give copies of the reports to parents. They will need them to digest and understand the information in them, to share the information with other people close to the child, and to avoid the weeks or months of record gathering which every application to a new program in the future will otherwise entail. (p. 523)

With families becoming more and more mobile, school records are very important, especially for exceptional children who may move from one part to another of the country's "nonsystem" of special education (Birch & Johnstone, 1975).

Careful Explanations of a "Diagnosis"

> Be sure the parent understands that there is no such thing as a one shot, final, and unchanging diagnosis. Make sure he understands that whatever label you give this child (if a label must be given) is merely a device for communicating and one which may have all kinds of repercussions, many of them undesirable. Make sure he understands that it says very little about the child at present and even less about the child of the future. Caution him about using that label to "explain" his child's condition to other people. (pp. 523–524)

The "diagnosis" is never final.

Parents are quick to understand the reasons for repeated careful reassessments if procedures and purposes are carefully explained. In the same way, if a handicap label must be applied to a child, its use is more readily accepted by parents if the accompanying reasons are expressed in plain and educationally meaningful language.

Child Rearing: A Problem Solving Process

Not everything about exceptional children is atypical.

> Help the parent to think of life with this child in the same terms as life with his other children. It is an ongoing, problem solving process. Assure him that he is capable of that problem solving and that you will be there to help him with it. (p. 524)

> *George Gallup, in a speech delivered at the University of Akron, remarked: "I am thoroughly convinced, on the basis of the many surveys we have conducted on the subject, that the very best way to increase the productivity of the schools is to establish a close working relationship with parents of school children. . . .*
>
> *"Parents tell us that they would like to attend seminars, to be held at regular intervals during the school year, which would give them the opportunity to discuss with other parents such matters as discipline, how to motivate students, how to establish good work and study habits, how to deal with alcohol and drugs, and many other matters. . . .*
>
> *"To hold these sessions in school buildings and during evening hours would add little to school costs while adding greatly to student achievement."* (The School Administrator, *October 1980, p. 20*)

Child rearing is basically a joyous process for most parents. Yet it also contains problems—even burdens—whether the children are exceptional or not. Parents range widely in their ability to cope with these problems. Teachers, of course, cannot usurp parental functions. They can, however, provide judicious words of encouragement or warning, depending on the situation, if they do not intrude. Teachers can also bring different parents together to learn and acquire strength from each other. Moreover, they can call attention to parent education programs or other community resources that may address specific concerns which parents have expressed. Sometimes school psychologists or other staff members conduct parent training activities directly in the schools, but often such activities are conducted in health centers or community agencies of other kinds.

Understanding the Child's Assets

> **Be sure that the parent understands his child's abilities and assets as well as his disabilities and deficiencies. (p. 524)**

Attend to the child's strengths as well as problems.

The way the teacher *behaves* about the child is perhaps the most important and effective way to "tell" parents about their child. This is also true of the way other significant adults and schoolmates act. When teachers openly recognize and encourage the use of exceptional children's assets, pupils follow their lead.

In one school, for example, a boy with complex multiple disabilities had very good manners that earned teacher praise. He was nominated by the pupils in his mainstream homeroom to serve on a schoolwide committee on student behavior standards. In a junior high school, teachers encouraged a trio of deaf girls to enter a talent show. They won first prize for the beauty and grace of their signs and gestures in "singing" a popular song. Teachers can help to create opportunities. Children and their parents can then seize and capitalize on them.

Dealing with Service Insufficiencies

> Warn the parent about service insufficiencies. Equip him with advice on how to make his way through the system of "helping" services. Warn him that they are not always helpful. Tell him his child has a *right* to services. Tell him to insist on being a part of all decisions about his child. (p. 524)

Be candid with parents about limitations in services.

Few complete and comprehensive "systems" of special education can be found anywhere. Nor are there comprehensive "systems" of social welfare, health care, recreation, public transportation, or other essential community operations that accommodate readily to exceptional persons and their families. In one city, a young man in a wheelchair could not enter the public library building because of steep steps and doors that were too narrow. In the same library, a 10 year old mentally gifted girl was emphatically denied admission to or borrowing privileges from any but the children's collection, so she was barred just as effectively. There remain the three great enemies: ignorance, tradition, and prejudice.

Parents are often quite willing to serve as the shock troops in assaults on community and regional service failings, whether in the schools or in other parts of the public sector. Linked together in organizations or on their own, parents are listened to by legislators, board members, and administrators. Teachers often can help by alerting parents and organizations to educational and related needs.

One frequent gap in community services is in programs for parents themselves. Some parents need opportunities for training and/or counseling for themselves or for their entire families. Deep-seated problems are sometimes first revealed in school contacts. Specialized parent and family counseling services are an urgent need for consideration in broad community planning.

Positive Thinking

> Some people with whom [the parent] talks (teachers, doctors, professionals of any kind, or other parents) may emphasize the negative. Help train the parent not only to think positively but to teach the other people in his child's life to do so. (p. 524)

Overemphasis on "negatives" helps no one.

Reality ought not be discounted. However, negative facts can be confronted realistically while building toward a constructive, positive outcome.

Parents: An Integral Part of the Process

Preceding suggestions do not apply to all parents or all situations, but each can be adapted to particular cases and leavened with the teacher's personal qualities. There are, no doubt, some instances in which it is not possible to establish meaningful interactions with parents. Nevertheless, communicating with and guiding parents is now an integral part of the teacher's responsibility. Other school staff members (counselors, social workers, principals, psychologists, supervisors) certainly share some of the responsibility, but in the final analysis it is the teacher-parent interaction that is essential.

Informal Parent-Teacher Conferences

The meeting of parents with their child's teacher often has profound significance for all parties, especially when the child's educational progress is problematic. The parents are likely to be deeply emotional about any "problem" they perceive. They may feel guilt, hostility, and inadequacy, and it may take time to reach a good working relationship with the teacher. Equally, the teacher may be apprehensive about a meeting with parents. Following are a few principles for consideration by teachers and other key school figures in conferences with parents of exceptional children.

Don't assume an absent parent will get a good second-hand report.

First, if possible, *meet with both parents for all conferences.* Teachers and other professionals who are experienced in conferring with parents almost uniformly warn against the assumption that talking with one parent results in good communication to a second parent.

Conferring with but one parent when there are two fails to consider the information that the absent parent could provide. It fails to include one of the significant parties in the planning and commitments involved. Finally, it risks creating or enlarging differences between parents in perceptions of the child and of their own roles in helping processes. On the other hand, when both parents are involved they can be assisted in understanding how important their mutual support to each other and to the child may be in creating a healthy environment for growth.

Parents do intend good things for their children.

Second, *assume good intentions by the parents.* Even when it appears to teachers that care and attention to a child at home are minimal or that there have been specific neglects, it is *always* appropriate to assume, when conferring with parents about school problems and plans, that they intend to be helpful and to wish good things for their children. Similarly, teachers deserve to be regarded as advocates for all children. There is no chance for such regard and trust unless it is mutual.

Third, *listen actively to the parents.* At conference time, professionals tend to err consistently on the side of assuming that they have most to communicate and should set the agenda. Too little time, usually, is left for listening to the parents. It is amazing what we do not know about children if we see them only in school. It is genuinely important to listen and then listen some more to parents. They know a great deal about their children. Usually it is a different kind of information because it grows out of the special sensitivities of home and family and out of the unpredictables of the child's life instead of the regularities of school life; but it is extremely important information.

Fourth, *consider all reasonable program alternatives with the parents.* In the process of assessing children and school situations, professionals sometimes make tentative plans and decisions, then ask essentially only for confirmation by the parents. For example, it might be decided that a child should go to a resource room for a period each day for help in reading; that a child will receive extra help in speech; or that a child is "not making it" in the local school and should be transferred to the behavioral learning center downtown. Professionals then expect the parent conference to come to early focus on the preferred new arrangement.

It is no mere courtesy to back up a bit and involve the parents in discussion of all alternatives for planning. Indeed, the observations of the parents and their views of the alternatives are essential elements in planning. If they lack information about alternatives, then they should be given opportunities to learn about them. This can be done through visits, readings, and further conversation with professionals and/or other parents. The parents' preference in school planning should be the one chosen if it is within reason. Even if that preference is not "best" in the eyes of the professionals, it is often a good place to begin a period of continuing study and planning.

Try to arrive at a plan that is definitely acceptable to parents.

Fifth, *expect criticism.* When children are not responding well to school programs, or when those programs are unusual and perhaps not well understood, parents frequently are deeply apprehensive or frustrated. Sometimes they may have been more aware of the child's special and continuing needs for a longer period of time and in more detail than current teachers of the child, and they may be tired of and disappointed about schooling in general. Because teachers represent schools, they sometimes become targets for the aggressions of frustrated parents.

Teachers may expect to be criticized at times.

Sometimes it works in reverse as well. Teachers may allow their general disappointments in parents of their community to be expressed in aggression toward particular parents. It helps to anticipate the likelihood that, as a teacher, one will become the object of hostility and criticism. Usually, it need not be interpreted as a direct, personal attack. Often the negatives will erode and a good relationship will be established if broad perspective is maintained and if responses are made only to realities and constructive aspects of the situation.

Sixth, *do not expect too much from a single conference.* Because they are often deeply emotional experiences it is unrealistic to expect a great deal of progress in any one discussion. Facing up to the learning problem of a child and talking through their anxieties and concerns can be a disabling experience for parents, one that is not always conducive to good listening or rational decision making. When situations become difficult, it is often wise to take a break and resume the discussions at a future conference. At the outset of any succeeding conference, it is probably a good idea to summarize what was discussed and agreed on at the earlier session(s). Memories of difficult conferences are often cloudy; thus, careful note-taking, summarizing, and review are important.

Seventh, understand that *parents will not always be interested in working closely with you* as their child's teacher or school principal. Sometimes they need a break and want you to take over as a professional and do your best, giving them a bit of respite. Sometimes they must give priority to other

Sometimes parents want teachers to go ahead without them.

problems or needs. It may even be a good sign of the confidence parents have in their teachers if they take a bit of time off!

The IEP Conference

In addition to informal conferences between teachers and parents, formal conferences may be required to summarize results of special assessments and to prepare individualized education programs (IEP's). In each case this calls for a meeting of (a) the teacher or teachers (regular and special) who have responsibility for instructing the child, (b) one or preferably both of the child's parents, and (c) a professional representative of the school other than one of the child's teachers. Usually this is the school principal, another administrator, or a supervisor. The child, too, should be encouraged to take part in the meeting, if it appears that meaningful participation would result. The school psychologist or social worker frequently are additional members of the IEP conference.

Several guidelines are important in planning and conducting the IEP conference:

IEP conferences need the discipline provided by a clear agenda.

1. Keep the proceedings simple. Avoid jargon; emphasize curricular decisions.
2. Clarify the purposes of the conference. Set an agenda and hold strictly to it. Build the agenda around a short series of questions, such as:
   a. What special instruction and related services should be provided, for what purposes (goals and objectives), by whom, where, when, and for how long?
   b. How will progress be monitored, and when will the conferees meet again to review progress and make new plans?
   c. Does the student qualify legally for special education and/or related services?
3. Make the arrangements as comfortable for all participants as possible. Find a convenient place and time; be prompt; proceed informally. Keep the number of professionals to a minimum.
4. Encourage the parents and the child's teacher, the persons closest to the child, to be the most active participants.
5. Try very hard to agree on plans for special education and related services which the parents can accept, at least for a trial period.

Try to provide special instruction in the regular class.

6. Give first attention to accommodations in the child's regular class. Consider "pull-out" programs (assignment to special settings outside the regular class, part-time or full-time) only for compelling reasons.
7. Specify the ways in which parents can be helpful immediately and in the long term.
8. Clarify rights to appeal decisions about the plan, to secure additional studies of the child, and to see school records.

The Content of an IEP

An IEP's minimum essentials are: a picture of the pupil's current educational status; a look ahead at goals that may be a year away; a sequence of short-term instructional objectives leading to each goal; a list of instructional and service requirements to allow the program to operate; an indication of how much and what aspects of the program will be in the mainstream; the program's beginning and ending dates; the criteria and schedule for evaluation of its effectiveness; a statement of the role of parents in relation to the plan; and the specification of changes to be made in the school situation (in staffing, training, or other aspects). Each of these content areas is considered in the following sections.

Keep the IEP short and clear.

Current Educational Status

Accurate information is needed on the pupil's present educational achievements in the cultural imperatives (basic skills) and in other curricular areas. State these in terms of actual present levels of in-school performance as observed informally by teachers and others, as well as in terms of standardized test results. Ascertain that actual achievements are not masked by discriminatory assessment procedures.

Goals

A one-year projection of educational goals is needed for the pupil, starting from present performance. For each component of curriculum there should be clear statements of anticipated outcomes. In reading, for example, the goal might be an increase in rate and comprehension to a specified criterion level. For physical education, it might be a specific level on a physical fitness scale, plus acquisition of a particular set of skills in tumbling and games. The one-year goals must be *feasible* and *appropriate* for the specific child under consideration, in the eyes of those who agree to the IEP.

Writing goals and objectives helps achieve focus.

Instructional Objectives

Step-by-step instructional objectives are necessary, too, as the means of reaching longer range goals. These are the formative elements of the IEP. They have a role both in implementation and evaluation. If a goal for a pupil is to attain ability to eat unattended in the school cafeteria, one shorter range objective might be to learn to carry a full tray from the line to a table without incident. Another might be to become skilled at cutting meat with knife and fork. Other steps would follow that would be determined by what the child already can do, where the gaps are, and in what sequence the remaining tasks might best be taught.

Instructional objectives to be included in the IEP should be major milestones. Depending on the curricular area, the number of objectives sequenced under each goal may range from three or four to eight or ten during the course of the year. "Best estimates" of expected times of accomplishment for each milestone should be included.

Instructional and Service Requirements

Instructional and service requirements ought to be detailed in the program. Otherwise the faculty and others involved may not receive the help they need to carry out their work. This section of the written statement might have four parts:

Be certain that all assignments for delivery on the plan are clear.

1. What professional and instructional support staff will be required, for what duties, and for how much time? Regular teachers usually need some of the time of specialist teachers to work with them in the regular class. Also, they often need instructional aides (readers, interpreters) and volunteers. Consultation time with supervisors, psychologists, and others should be anticipated, too. These and any other personnel needs should be listed, with responsibilities and time estimates specified.
2. What instructional facilities, materials, and media will be required, and when? For example, a gifted physically impaired junior high pupil may require special access to high school or college libraries and laboratories to assure an "appropriate" education. Typewriter, tape recorder, Optacon, and tactual shapes and forms may have to be supplied at home and in the kindergarten for a young visually impaired child. Regular and special teachers, working from the statements of goals and objectives, can assemble this list and indicate approximate times when they will be needed.
3. Educational ancillary services must be planned and specified in advance. These might include transportation to and from school, assistance in moving about the school, food services, and other similar matters.
4. Special education-related nonschool services important for the child ought to be noted also. Arrangements for these services should be proposed in ways that will not interfere with education. Parents may need help in scheduling physical and occupational therapy or other health-related treatments during time other than school time.

Degree and Nature of Mainstreaming

Try it first in the mainstream.

The IEP points out the extent to which the pupil participates in regular and special education programs and how that may alter over time. For example, an objective may be to shift the student into a less restrictive environment during the year.

Some pupils may be able to participate most of the school day as members of the regular class with little or no special education being supplied, as long as it is available when needed. An example might be a child whose only exceptional characteristic is an articulation disorder such as a /th/ substitution for the /s/ sound. On the other hand, four or five deaf children might attend school all day every day in a class where the regular teacher is also a teacher of the deaf. In that case, the deaf children would have special education available 100% of the time to be supplied as needed.

Required Period of Time

The usual period covered by the IEP is one year. However, there are shorter term but significant special education interventions. Examples occur among pupils with flareups of behavior disorders or pupils with illnesses that keep them out of school from two weeks to three or four months. The IEP's beginning and expected ending dates should be specified. A review conference should be scheduled when requested by any team member.

Specify the time frame.

Evaluation of Progress Toward Goals

How progress is to be judged should be described in the document. The group who planned the program ought to ask, periodically, about each short-term instructional objective: "Are we getting there? Are we on time?" Affirmative answers justify a positive evaluation and the continuation of the program. Other answers should suggest alterations in relevant parts of the IEP in those areas that are not proceeding as expected.

An IEP is agreed on originally with the understanding that it is the soundest approach the joint planners can develop. If it proves to be imperfect, it should be amended by the same process that brought it into being in the first place.

Parent Activities

A statement of activities that will be undertaken by parents or others outside the school situation as part of the collaborative effort on behalf of the child is advisable.[3] For example, children who have great difficulties with academic work sometimes are tutored by a father or mother to the point of excess, in view of what the school may be undertaking, and sometimes the efforts of parents and teachers are inconsistent and counterproductive. In forming IEP's, careful analysis and planning should extend to family, home, and community experiences so that they will be supportive of the child's total program.

The parents ought to share in the commitment to explicit planning.

Changes in School Environment or Programs

Specifications of needed changes in the school environment or in programs should be enumerated. For example, the schools may not employ or deploy a sufficient number of specialists to conduct programs needed by a particular child; or the district's inservice education program may have failed to include the preparation of school personnel to perform functions essential to serve certain exceptional students. Both the assessment and planning processes need to attend to these situational requirements, and the IEP should specify whatever changes are necessary.

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[3] Items in this section and the next one are not strictly required by existing regulations under Public Law 94–142. They are included because they appear to the authors to be logical and essential parts of an IEP.

The school may have to change, too.

Above all, IEP designers are not to be limited in what they propose by inadequacies of personnel or other resources in the school district. The IEP should call for the specific education and services the child needs, without regard to whether they are currently available.

Teacher Accountability

What is the teacher's responsibility and accountability for the attainment of IEP goals? How is accountability allocated?

The question is sometimes put in terms of whether the teacher should be expected to produce specified outcomes in pupil achievement or whether one should look instead at the consistency and quality of the teacher's professional performance as the index of accountability. Certainly the two should interact. Satisfactory attainment by the pupil should result from good quality teaching, and consistently sound teaching should produce suitable achievement.

But the teacher actually controls only the teaching itself. Many other factors can intrude between the teaching and its impact on the child's achievement. In addition, matters over which the teacher has only limited influence may have caused the wrong teaching approach to be taken in the first place. There might be a clumsy fit between what the pupil needed and the instruction planned, so it would be ineffective instruction no matter how expertly applied.

Program effectiveness is the preferred focus of evaluation.

Therefore, when the implementation of the IEP is evaluated, we believe the adequacy of the teacher's performance should be judged by the consistency and quality of the program's execution rather than by the pupil's achievements. That is in keeping with the principle of *consensus doctorum,* namely, that agreement among professionally qualified individuals defines a reasonable standard of practice. At the same time, we believe that it should be a "hard" test. Acceptable professional performance should include being alert to when teaching or other services are unproductive and being energetic about bringing the planning conference back together to reconsider the educational strategy and tactics it initially adopted.

Erick's Individualized Education Program

To provide one example of an IEP, we return here to the case of Erick, whose problems, life situation, and assessment data were presented in Chapter 3. This material describes what was worked out for Erick. It is not intended as a prototype of an IEP. For that purpose, it is best to work with the IEP's in one's own school system.

Present Developmental Level

☐ Erick was 5 years and 10 months of age on the day of the planning conference (December 15). His intellectual development is slightly lower than average for his age. It is not clear if that is a permanent condition or if it can be altered favorably. His language development is a bit lower, estimated to be about the level of children just reaching age 5. This interacts with his intellectual development, since language skill is a powerful indicator of intelligence.

The first part of the plan summarizes educational problems, thus comprising the educational diagnosis.

Erick is somewhat awkward in motor behavior. For example, he runs slowly and is not able to skip. He grasps and uses pencils and crayons in immature ways. He lacks skills which are necessary for learning to read, specifically in sound discrimination. He will need help in learning to discriminate sound similarities and differences before letters and their corresponding sounds can be taught. Erick is often inattentive in class. Because regular instruction has not been sufficiently effective Erick now shows exceptional needs that qualify him for special education and related services.

Special Education and Related Services

Beginning immediately after the Christmas holidays, the following steps will be taken:

The second part specifies what will be done.

1. Erick will receive tutoring for one hour daily by an aide who will be selected and supervised by the special education resource teacher. Emphasis will be on prereading skills, particularly sound discrimination. This instruction will be provided in Erick's regular class.
2. Erick's teacher will be assisted by the school psychologist in designing and conducting a behavioral management plan to increase Erick's persistence on tasks assigned by the teacher and to reduce off-task behavior. The psychologist will help the teacher establish a daily system for recording results.
3. The physical education teacher will introduce instruction in motor activities (running, skipping, hopping) that can be used by Erick's regular teacher and extended by his parents in occasional sessions, both formal and informal.
4. Erick's regular teacher and the school principal will coordinate these activities and will call conferences with other participants from time to time to review progress and plans.

Goals

1. Erick will show progress in staying on task in the academic assignments given by his teacher.
2. Erick will show progress in specific prereading academic skills.
3. In motor skills, as reflected in well coordinated walking, running, and other ordinary movements, Erick will show significant improvement.

Long-range goals appear in this part of the plan.

Objectives

The fourth part contains specific objectives that relate closely to parts 1 and 2.

1. By February 1 Erick's off-task behavior, as observed by the school psychologist in the regular kindergarten class, should be reduced to a ratio of 2 to 1 (frequency of Erick's off-task behavior compared with the average of his classmates).
2. By April 1 Erick will consistently discriminate the sounds of the letter consonants in beginning and ending positions of words, and will be able to match letter sounds with printed letters at the level of at least 75% accuracy. He will consistently match short vowel sounds as presented in one-syllable words.
3. By April 1 there will be noticeable improvement, as judged by the parents and teachers, in Erick's coordination.

Monitoring and Next Conference

The responsible professionals indicate how progress will be recorded and how they will work together.

1. In late February and again in late April: (a) the psychologist will repeat observational studies in the classroom of Erick's off-task behavior compared to that of his classmates; (b) the special education teacher will repeat informal studies of prereading skills.
2. With the aid of the special education resource teacher, Erick's teacher will prepare weekly charts summarizing results of the behavior management program.
3. The physical education teacher will make biweekly progress reports to Erick's teacher and discuss progress.
4. The conferees will convene again in early May (or earlier, if the teacher thinks it is necessary) to review Erick's program and progress and to consider plans for the next school year and a possible summer program.

Other Considerations

1. Parents agreed that a full report of the school's findings and plans for Erick should be sent to the examining physician, and that such reports should be made in the future.
2. The legal rights of parents to due process, added studies, and appeal were explained at the IEP conference.

The IEP is a plan, not a contract.

Every IEP will probably have unique qualities. It is not really possible to put everything into writing, and the IEP is not a binding contract on the teacher or others. The central idea, though, is that plans are agreed to and that everyone involved is a participant in making them and in bringing them to fruition.[4] □

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[4] The best single resource about IEP's is, in our judgment, D. P. Morgan's *A Primer on the IEP* (2nd ed.), published by the Foundation for Exceptional Children, 1920 Association Dr., Reston VA, 1981. See also the *Federal Register*, January 19, 1981, pp. 5460-5474.

The Student Who Doesn't Qualify as "Exceptional"

Almost every child falters in school occasionally. Often it is in a particular context such as writing, physical education, shop, or geometry. At other times it is in personal or social situations. Sometimes such students are studied diagnostically and carried through the IEP conference only to find that they do not qualify technically for special education, though the problems they and their teachers confront are no less real.

These students often can profit from some form of program modification that can be worked out informally (Hayden, 1979). The child's needs should override any arbitrary or rigid regulations. If special education is made available from time to time for children who are having difficulty but who are not technically eligible, the results should be favorable for all concerned.

Parent Groups

Parent groups have grown steadily since about 1945.

Although some volunteer groups concerned with exceptional children had existed for many years (such as the National Society for Crippled Children and Adults or the American Foundation for the Blind), a major development of parent groups of handicapped and gifted children began shortly after World War II. For example, in the late 1940's a number of local and regional Associations for Retarded Children were formed; they came together to form the National Association for Retarded Citizens in 1950. Literally thousands of similar parent groups now exist at local levels in many different "categories." Many have organized state and national structures as well.

A somewhat new phenomenon is the organization of cross-category coalitions of parent units. In Minnesota, for example, the PACER organization (Parent Advocacy Coalition for Educational Rights) has been formed to help strengthen broad efforts in child advocacy, parent training, legislative lobbying, and public education. PACER is a coalition of 18 agencies.

Parent groups have been enormously successful in the United States in calling public attention to the needs of exceptional children and in achieving needed legislative and policy developments. They represent an important resource for educators in achieving mutual understanding and support for programs that serve children. They can also act as a goading force working upon educators to undertake necessary developments on behalf of exceptional students.

Parents of Nonexceptional Children

All parents need to be informed about modern special education programs.

Changes occurring in education for exceptional students call for broad understanding by *all* parents. Perhaps the least involved and most underinformed parents are those whose children are nonexceptional. Increasingly, they hear reports of special programs for gifted and talented students and of the presence of handicapped students in regular classes. If they attend PTA meetings, they hear expressions of concern by parents of exceptional children.

Teachers and other school staff members must interpret the changes occurring in special education to parents of nonexceptional children. Most important of all, perhaps, is the need to supply factual information on what is happening and why. All parents need help in understanding human differences. They need to know how school programs can be developed that are helpful to *all* children—with no exceptions.

Instructional Procedures Useful for All Students

Many special education instructional principles apply to all students.

Although instructional plans for exceptional children are individualized, many instructional procedures are useful with all children. Their full application is often particularly important in the case of exceptional students, but they are not unique in principle. Procedures developed for work with exceptional pupils have been successfully applied to the education of all students. This diffusion of special education insights and procedures is a very desirable trend.

There are, of course, some forms of instruction and some content which are particularly appropriate for exceptional children; for example: mobility training, braille, and other forms of tactual approaches to reading for certain pupils who are visually impaired; breath control and delayed sound feedback for certain pupils who stutter; and speechreading and/or sign and manual communications for pupils with hearing impairments. But even these are sometimes useful with other children, too.

Following is a brief list and discussion of some of the broader principles that can be applied in planning instruction for all students, including those who are exceptional. They are especially effective with so-called mentally retarded, learning disabled, emotionally disturbed, or behavior disordered students.

Undercutting: Beginning a Little Below Where the Child Is

The lesson should yield success from the first moment.

Start to teach well within the range of a pupil's present skills and understandings, rather than at the limit (Betts, 1946; Birch, 1955). If a child's reading comprehension is at grade 3.5, the day's reading should start with material at grade 3.0 and move on to more challenging material after success experiences. If the difficulty level begins to upset the youngster, drop back a little until the reader regains confidence. The same procedure can be followed in other curriculum areas.

Many exceptional children and youth experience more than a fair share of failures in the ordinary course of life. The cumulative effect is an expectation of failure. Undercutting is a sound tactic to combat such expectations in learning. If the instructional sequence is matched to the pupil's capacity and deliberately seeded with "easy spots," the child's level of self-expectancy will be confirmed (rewarded) often enough to keep learning on an upward course.

Some children, of course, function inconsistently from day to day. For example, there may be days when a particular child is completely unable to

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Study Says Schools Ignore the Disabled

"A coalition of children's rights and education groups charged in a report published today that hundreds of thousands of handicapped children are being denied federally mandated services and educational opportunities. . . .

"Specifically, the report charges that . . . handicapped children are 'unnecessarily segregated' in special schools. According to the report, an estimated 71,000 disabled children nationwide receive totally separate school programming . . . despite the legislative objective of integrating handicapped children into the mainstream of education.

"Marian Wright Edelman, director of the Children's Defense Fund, a member of the coalition, said, 'The denial of appropriate education to handicapped children not only victimizes the children, it also victimizes taxpayers who must bear the burden of their continuing dependence.' "(Taubman, 1980)

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attend or respond to teacher instructions. Another child may be able to work at a high mastery level only occasionally. In applying the principle of undercutting there will be occasional cases of extreme difficulty, even under the best of circumstances, that call for teamwork by the school staff. In such cases, the teacher may wish to consult with a special education teacher or school psychologist. They can help design systems to help the teacher recognize the child's signals and choose instructional strategies that will facilitate greater attentiveness and responsiveness.

Children aren't always consistent from day to day.

Using Direct Experience

The process of instruction is made more interesting if the pupil is engaged in hands-on experiences rather than being confined to a passive observer role. Methods of teaching that contrast active and passive learning roles follow:

Pupil as Active Participant	*Pupil as Passive Participant*
Discussion, pupil-led	Demonstration by teacher
Experience story reading	Lecture by teacher
Dramatic play	
Discovery approaches	
Independent study	

Keep the curriculum in touch with realities in the life of the student.

There is a great difference between arbitrary teacher assignment of a topic to be investigated and the teacher's recommendation from a pupil-generated list of three or four topics. There is also a great difference between a solely textbook-determined approach to social studies and one based on actual, local community issues, as unearthed by pupils. When the focus is shifted from the ideas of the teacher and the textbook to the interests and experiences of the pupil, the hackneyed expression "meaningful" takes on reality.

Helping the Child Set the Pace of Learning

Students can help set the pace for instruction, and improve it, too.

Even very young children sometimes have a surprising degree of awareness of their own best pace for absorbing new experiences. That self-knowledge grows in usefulness as the children have more opportunities to set their own rates on learning tasks. Teachers are well advised to encourage pupils to become aware of their own performance characteristics and to help in management of the instructional process. "How long shall we plan for this activity to take?" is preferable to "This assignment is due by noon tomorrow."

Factors related to pupil requirements sometimes influence learning pace significantly. Problems of mobility, slowness in writing, or speech impairments are but a few examples. Factors extrinsic to the pupil may also have an effect, such as the relative difficulty of the learning task, other assignments and time commitments, and the adequacy and availability of teacher or tutorial assistance.

Three outcomes are to be looked for:

1. The pupil learns to estimate accurately how long it will take to accomplish any new learning task.
2. The pupil learns to set a personal learning pace that will accomplish a task within a reasonable margin of error.
3. The pupil learns to identify and practice techniques for advancing the pace of learning while maintaining standards of comprehension and retention.

Special teachers can help design systems.

Special education teachers can assist other teachers in designing instructional systems for students who have particular difficulties in the pacing of instruction and learning.

Employing Principles of Reinforcement Systematically

The procedures developed by applied behavior analysts are often very useful to teachers who work with special needs students. A number of such schemes are based on the work of Skinner (1953) in the facilitation of learning. They may differ somewhat in emphasis, but all have the following elements in common:

1. A pupil's specific behavior is chosen for attention. It can be any behavior from learning an additional combination or carrying a tune to proper fingernail hygiene or using polite language.
2. Systematic attention is given to reinforcing the pupil's desired behavior when it occurs. The teacher who is not familiar with the basic principles of reinforcement should carefully study materials on the optimal conditions for achieving and maintaining rate changes (Haring & Phillips, 1972; Haring & Schiefelbusch, 1976; Lovitt, 1978).

3. Systematic records are kept on the pupil's progress toward mastery of the desired behavior, and reinforcements are changed as necessary to maintain progress and attainment.

These procedures are readily applied by teachers, singly or in teams, and by parents under teacher guidance. They supply a promising way for teachers and parents to work together to help children develop and learn.

The Premack principle (Higbee, 1981; Premack, 1959) is a special case of operant conditioning in which learning activities themselves are used as positive reinforcement. Desirable learning activities follow immediately as a positive consequence of desired behavior on a less appealing learning task. For example, if a child who loves music is allowed to go to music activities as a consequence of good performance in mathematics lessons, which the child values less highly, the result should be a better rate of performance in mathematics. The principle can be made operative in a variety of school settings and with all kinds of pupils at all levels.

Systematic reinforcement is the key.

Teachers may wish to involve special education teachers or school psychologists as advisors and consultants in the application of behavioral principles. The consultant can make in-class observations to pinpoint behaviors that need to be influenced, to establish the rates at which they appear, and to design systems of reinforcing change. The most frequent failures in application result from inconsistency and not keeping systematic records. The use of a consultant is recommended to help install a workable system for dealing with extreme behaviors that need either to be accelerated or decelerated.

Giving the Child Choices

The variety of stimuli in today's world makes it imperative that children learn during their school years to make intelligent choices. Happily, to give pupils opportunities for choices is often a helpful way to motivate them toward improved achievement. One way is to arrange the day's activities so that each pupil can select a personal daily schedule, as long as all parts of the day's work are accomplished (Wang, 1981). Such a self-scheduling gives needed practice to pupils who tend to be disorganized. If options are presented carefully, a few at first and more as the child learns to handle them, the teacher will be able to observe the pupil's progress in self-management. Areas of pupil choice can include *what* is to be done, *when, where, with whom,* and sometimes, *whether or not* to take on the task at all. It is fundamental, of course, that the teacher monitor the pupil's decisions and performances very closely to be sure that the youngster is not overwhelmed, on the one hand, or unchallenged on the other.

Children must learn to make choices responsibly.

Contingency contracting is another way to construct a learning environment replete with opportunities for practice in how to make wise choices. The pupil and teacher agree that if and when a certain task is accomplished, the pupil will then be free to do one of several other appealing things. Contingency contracting can be used with more than one pupil at a time. Sometimes an entire class may be involved.

Occasionally, some students should be given freedom just to take time out, to plan disengagement from school tasks for a while. Special physical spaces for time out are sometimes necessary also for children who have episodic periods of incapacity to engage in learning activities. Special education teachers or school psychologists can help colleagues plan the use of time out as a student choice.

Encouraging Constructive Divergent Thinking

Thinking should be more than simple repetition or finding "right answers."

Many children appear to lose their imaginative abilities during the school years. Constructive imagination is a wholesome quality. It may well be the precursor of adult artistic, literary, or scientific creativity. The conscious ability to think in divergent ways is also important in its own right for problem solving in childhood and youth.

Teachers can take deliberate steps to foster positive forms of creative thinking in all aspects of the school curriculum. There is no child, young or old, high achiever or low achiever, who cannot profit if the following procedures are a daily part of the teacher's instructional behaviors:

1. Planning a "what if" element in every lesson. What if suddenly no one in the world could see colors? How would that change our lives? What if the average temperature of the world rose 2 degrees for a year? What if the South had won the Civil War? What if no one in the world could hear? What if there were no insects? What if Columbus had not received backing for his explorations?
2. Checking to see that lesson plans, homework, and tests have balance between questions with only one satisfactory answer and questions that allow the pupil to reason through to alternative appropriate responses.
3. Encouraging each child, at least once a day, to introduce a divergent thought into whatever is being studied.

These three procedures should not preclude situations in which only one answer is correct. The world is full of such situations. It would be a disservice to overlook teaching pupils the kind of convergent thinking that is needed in those instances. What is wanted is equal time for acquiring skill in and learning to value the constructive divergent thinking upon which so much of each pupil's future might depend.

Some students have great difficulty in accepting assignments or structuring from anyone in positions of authority. They have extraordinary need to design their own approaches to schooling. Perhaps they are eager to read widely on broadly framed topics and to engage in creative discussions about them, but resist and resent directions by teachers to converge on particular knowledges and skills. Adolescents who drop out of regular schools to enroll in street academies or school-within-a-school arrangements may be seeking more opportunities for divergent and creative thinking. They may be best served when encouraged to explore and to create on their own if, for a given period of time, they are unable to tolerate a more balanced convergent and divergent educational diet.

A high school student made a brief presentation on abortion laws to the class and then led a spirited half-hour discussion. Afterward, the student asked, "How did it go? How did I do?"

"Don't you know?" asked the teacher. "Can't you tell from what you saw and heard?"

"No. That's the first time in my whole school career that I ever did anything like that!"

Giving Children Chances for Leadership

Recent studies have revealed that (a) the great majority of talking in elementary and secondary schools is done by teachers, and (b) the overwhelming majority of all questions in those classes are asked by teachers. The consequent advice for teachers is to set up more situations in which the teacher is a listener and responder rather than a talker and a questioner.

Leadership is a subtle matter, often no more than a feeling by the person who is before the group. Pupils who are comfortable in leadership roles are those who have had practice in leading, under teacher guidance, and who are leading because they are acknowledged to be ready for the role by the rest of the group.

The market for leaders is very good.

Leadership skills range from the knowledge of parliamentary procedures, which are essential to the conduct of formal organization meetings, to personal control, to the mastery of such techniques as brainstorming. The elements of these skills are important to all pupils, and especially to exceptional pupils. They originate and develop best in classes where teachers do not monopolize informal leadership opportunities.

Using Peer Instruction

Children learn a great deal from each other and retain what they learn at a high level. Teachers can harness that pupil power and turn it to even more effective use.

Pupils can teach pupils with mutual advantage, but it takes planning.

In one school, fifth and sixth grade pupils voluntarily give part-time service as teacher assistants in the third and fourth grades. They flip flash cards to reinforce arithmetic combinations or reading sight vocabulary, and tutor one, two, or three of their younger schoolmates at a time. In another school, musically talented pupils join with the music teacher in coaching aspirants to the school band, orchestra and chorus, and small instrumental and vocal units. In secondary schools, pupils serve as laboratory assistants in biology, chemistry, and physics; as assistant instructors in physical education, dance, and art studios; and as theme readers for less advanced composition classes.

The activities are not all teacher-generated. Three husky fifth graders stopped the principal in the cafeteria one day. "We'd like to be the stage set-up team for assemblies, Mr. Williams. Just let us know what you want moved." A high school junior volunteered to a physical education teacher, "I'll help you for one hour a week in the adaptive physical education classes if you will teach me something about fencing."

Student helpers themselves benefit in many ways.

Pupil to pupil instruction need not be exploitative. Both pupils ought to benefit. Older, emotionally disturbed pupils gain self-confidence through reading stories to kindergarteners. Gifted students, while helping to teach others, extend and apply their own knowledge. High school pupils, who "buddy" with deaf students by sharing class notes and rechecking comprehension of assignments, receive special instruction in efficient note taking. Other secondary pupils obtain credit toward extracurricular activities awards when they help students in wheelchairs or carry their books. Moreover, many of the helpers engage in reciprocal academic tutoring with the same pupils.

Additional potential benefits include the development of empathy, willingness to listen, and rudimentary counseling skills. The notion of responsibility for helping others also becomes more real. Equally important, young people can sample the activities, problems, and satisfactions of the professional educator. A more knowledgeable pool of potential educators can result.

Teachers may wish to consult with their special education teacher or school psychologist for help in setting up training systems for students who have agreed to participate in intensive tutoring exercises with handicapped students (Sprinthall, 1980).

Using Pupil Feedback

Most teachers look informally for pupil reactions and use them to sense when things are or are not going well in a lesson. Highly skilled teachers have developed the ability to stand outside themselves and make relatively dispassionate assessments of their own performance. That quality of consciously using oneself as an instrument to guide and mediate learning may be the key characteristic that separates the journeyman from the artist in teaching.

Know how pupils are doing, and use the data for planning.

Pupil feedback comprises the external data needed by teachers to help determine the worth of what they do. To collect data informally is of value, but it is much more useful if collected systematically. When ordered data is combined by teachers with their own subjective impressions, the information forms a basis for decisions about next steps.

Tests are the most widely used device for obtaining pupil feedback. Pupils should be tested frequently, and the tests should be extended to real life situations. Washing hands before eating, for instance, is not really learned until it is part of a pupil's regular day to day behavior. Marking the correct tense of a verb on a multiple choice test does not assure that the child will use the correct tense in writing or speaking; observation of everyday usage is the proper test because it refers directly to the criterion.

Teachers often find it useful to discuss with pupils what forms tests should take and when they should be administered. Even in the earliest years, children are surprisingly perceptive about what they need to learn and how mastery should be tested.

Pupil insights regarding the relevance of what is being taught should also regularly be sought. For instance, eight pregnant inner-city teenagers were drawn into a discussion of how they wanted their babies to talk when they grew up. In the inner-city argot? In the stylized form of the television commentator? Like admired contemporary personalities? They decided there would be real advantages in having a good command of both inner-city and cosmopolitan language. It was a short step then to more student participation in self-testing, monitoring their own and each other's speech, and then writing.

Modern instructional systems have built-in checkpoints to supply feedback to the teacher. These procedures are even more helpful when the teacher supplements them by informal observations and student ideas.

Giving Prompt Feedback

Pupils are motivated by a sense of their own progress.

In contemporary instructional systems, information on performance is rapidly returned to pupils. There is substantial evidence that the shorter the time lapse between action and reaction, the more learning is facilitated.

It is helpful for pupils to see their progress charted, whether in learning foreign language vocabulary, reading novels, staying in one's seat, making a set of bookends, or mastering spelling words. Charting often serves as a reinforcement. Although charts can be maintained by the teacher, aide, or a pupil who is "chart coordinator," the technique seems to work more effectively if the learner makes the periodic and cumulative entries.

Whether charts or other visual displays play a part in pupil feedback, it is crucial that the entire response system be domain-oriented rather than norm-oriented. Pupils gain the most if they can measure progress against their own earlier achievements rather than against a norm (an external criterion made up by averaging the achievements of other pupils).

Moving from Familiar to Unfamiliar

In some respects this procedure is a way of saying, "Individualize instruction," but it goes deeper than that. Pupils frequently are unaware of the important linkages of previously learned tasks to the "new" ones that confront them. "Begin where the learner is" takes on special significance in this context.

Teachers who probe carefully are sometimes surprised at what pupils know and what they are able to do. A 9 year old Mexican American boy appeared very deficient on intelligence and achievement tests, even when examined in Spanish by a sympathetic person. He could read and write less well than most second graders. Yet he held his own with much older pupils on the school playground, and he organized a small but tough group that he led like commandos. Delving into his background showed that since he was 6 years old he had hawked cigarettes in a Mexican border town, exacted tribute from other street children there, and maintained himself with only a tenuous relationship with a home and a mother who was preoccupied with her own survival. It can be assumed that the Spanish in which he was examined at school bore about the same relationship to his natural language as midwestern American does to Louisiana Cajun.

Instruction should move from strength to further strength.

The first step for the teacher is to find out where the pupil is, educationally speaking. That calls for sensitive probing and listening. Once it has been ascertained what is *familiar* to the youngster, the teacher then can help build a bridge to what is familiar to the other pupils. That calls for taking small steps, at least at first, and reinforcing them strongly. Once started, however, the network that ties unfamiliar to familiar can expand geometrically, at whatever rate the child proves capable of maintaining.

The special education teacher and other consultants can help in special instances with children who required detailed study. It may be helpful for the school social worker to study the home background and cultural context from which the student comes. The psychologist often can help specify cognitive functioning and language or other achievements that need to be considered in trying to "match" child and program.

Modeling Behavior

Models reveal it all.

Children tend to imitate adults and other children whom they admire. They model their own behavior to conform to the examples of others they observe to be successful. This phenomenon can be turned into a strong and versatile instructional tool, especially when it is combined with an understanding of the power of positive reinforcement.

For example, one teacher felt that Martha Jane and Andy were fine examples of how pupils should behave, both academically and as school citizens. The teacher often mentioned that to other pupils, suggesting that it would be well if all of them were like Martha Jane or Andy. When that did not seem to affect students who misbehaved, the teacher asked for consultation.

She was helped to pick out specific misbehaviors in certain children and decide how she wanted to change them. For Sylvia, it was raising her hand for attention rather than interrupting others. For Billy, it was keeping his hands at rest on his desk rather than tapping with a pencil or poking the child in front. She was also helped to position Martha Jane and Andy where Sylvia and Billy could usually see that their correct behavior was often rewarded.

Positive behaviors receive teacher attention.

Whenever Sylvia or Billy achieved an objective set for them, even for a short time, the teacher smiled or quietly made a favorable comment to them. From time to time, but not always, when either Sylvia or Billy performed as desired, the teacher told them they could choose a favorite activity. When they had mastered the behaviors set as initial objectives, the teacher then moved on to set new goals that focused on other behaviors.

The teacher had learned how to go about accomplishing two broad goals: (a) to guide Sylvia and Billy toward using certain other pupils as models; and

(b) to embark on a series of systematic moves to help them find increased satisfaction in more acceptable academic behavior.

The teacher, of course, is a model of major dimensions. A teacher who habitually shouts at children reinforces loud talking and shouting by pupils. On the other hand, students will also tend to imitate the teacher who is calm and speaks directly in a well modulated tone. In short, the actions of teachers tend to reappear in their pupils.

Using Reviews Meaningfully

Successful teachers use frequent reviews to remind pupils of what they have already learned. Opportunities to repeat, and thus to see and feel one's own achievements, build and strengthen self-esteem.

Memories aren't perfect, so review.

Review should be regular, meaningful, and focused on recent learning. When it includes fundamentals that were learned earlier, the association between those fundamentals and recently learned material should be made explicit. A good way to make review meaningful is to encourage pupils to teach what they have learned to others. Allowing committees of pupils to invent new ways of review, or incorporating reviews into such activities as dramatic play, games, or publications is also effective. Almost any kind works, provided it is meaningful, regular, and clearly described as a review activity to pupils.

Helping Pupils Learn How They Learn

For at least the past half century, elementary and secondary school curricula have included the sciences of mathematics, biology, chemistry, and physics. Only recently have the behavioral sciences been included in the course offerings of public schools. In many secondary schools, psychology is now being offered as a course, frequently accompanied by laboratory activities.

Students can learn about learning, just as teachers do.

However, the content of psychology is such that it need not always be taught formally. All children can benefit from acquiring insights into how and under what conditions learning takes place. Learning about learning (a) gives pupils a realistic perspective on their own cognitive, affective, moral, and motoric development; (b) explains interpersonal differences in style or approach to learning; (c) makes pupils more knowledgeable participants in arranging their own learning experiences; and (d) helps pupils understand the concept of development as it relates to different ages and stages of growth.

Encouraging elementary and secondary pupils to "learn how they learn" does more than provide theoretical knowledge, important as that can be. It helps pupils make the theory operational, in parallel to the professional work of the teacher, and it helps increase their skills in managing their own learning and relating to others.

Limiting Extraneous Stimuli

If it's unnecessary, or distracting, get rid of it.

Industrial engineers emphasize the importance of keeping work places safe and efficient by preventing the intrusion of unnecessary and distracting objects or materials. The same general principle holds true for the teaching-learning space of teachers, aides, and pupils. Competing noises, strewn objects, garish and clashing colors, and strong light contrasts produce testiness and irritation when anyone, especially an exceptional child, is trying to concentrate on a meaningful responsibility. The elimination of clutter increases effective use of space, focuses attention on the specific task of learning, and reduces distractions.

An uncluttered environment does not mean that a Spartan one is desirable. Nor does the reduction of distractions demand the closeting of pupils away from each other to a noticeable degree. Rather, it is a call for the simple, uncomplicated, and orderly organization of an instructional space (by both pupils and teacher) that permits the conduct of group or individual activities under conditions of mutual respect and consideration.

Invoking the High Interest/Low Difficulty Principle

Children aspire to accomplishments beyond their social development levels or physical capabilities. The 2 year old wants roller skates; the 3 year old wants a two-wheel bike; and the 11 year old wants to drive a car or work in a supermarket. A normal part of growing up is learning to tolerate the discrepancy between desires and reality.

Interesting things can be communicated at many levels.

School can be a tragic experience, however, when age- and grade-appropriate textbooks are beyond a child's reading capabilities. Perceptive teachers have found several ways to break the usual one-to-one relation between high interest level and high difficulty level.

First, books are now available at every grade level that have been especially rewritten. They maintain the high interest of the original, but vocabulary and sentence complexity are sharply reduced. These books include elementary readers, history and other texts, and literacy works of all descriptions.

Second, pupils with limited reading ability usually have normal hearing comprehension. They can use books that have been recorded for blind persons, and they can study through hearing the same material that their classmates study visually. If the specific material needed is not available on tape, other students, aides, or community volunteers often are willing to record it. Finally, advanced students are frequently willing to share what they have learned through reading with students for whom reading is not available as a channel for learning.

Limited reading ability is less of a bar to achievement when procedures such as these are used. They make it possible for remedial instruction to proceed without building up excessive pressure in pupils and delaying their academic progress in other content areas.

Being Consistent

Successful teachers have learned that pupils, aides, parents, and colleagues function better when they know what to expect. Consistent teacher behavior permits other people to plan their own behaviors with the certainty of what the consequences will be. Pupils themselves report time after time that one of the most powerful influences on their behavior is the teacher's example.

Make your situation predictable on the essentials of good order.

Consistency is important for a sound working relationship between teacher and pupils. It is even more important now because of two growing phenomena. The first is instruction in open space, where teachers interact more frequently with each other and with a wider range of pupils. The second arises out of the regular teacher's new role as the captain of the team that integrates exceptional children in all classes. Consistent professional behavior by the teacher-leader can be the keystone to effective team operations.

Observing the Child Closely

Careful observation yields useful information.

Educational diagnosis (or assessment), discussed in the preceding chapter, is inextricably intertwined with instruction. The most satisfactory way to gain insight into a child's learning behavior is to try to teach the child a skill in a standardized situation and to make observations while doing so. If the teacher attends to how the child responds—the child's feedback—enough information usually surfaces to indicate how instruction should be modified or revised to maximize the child's ability to learn. Thus, all teaching can be used for diagnostic assessment.

Prevailing Versus Preferred Practices

This section summarizes the chapter and pinpoints the changing aspects of working with parents and instructional planning.

Prevailing Practices	**Preferred Practices**
1. Teachers receive no preparation for dealing with parents and families.	1. Teachers receive specialized preparation for work with parents, including some skills in counseling.
2. Parents of school children have only the PTA as a group activity related to schooling.	2. Formal groups of parents of exceptional children and coalitions of such groups exist to advocate for their children.

Parent education should be stressed.

Preferred practice emphasizes the philosophy of negotiation.

Prevailing Practices	Preferred Practices
3. School-parent conferences involve only the mother, in most cases.	3. Both parents participate in conferences with teachers and other school personnel whenever possible.
4. Parents receive no training for participation in school conferences.	4. Through information provided by school authorities and training provided through coalitions of parent groups, individual parents are well informed concerning their rights and other procedures for instructional planning.
5. Planning for individual pupils is informal and nondocumented in terms of specific objectives and processes.	5. Individualized education programs are drawn up recurrently and specifically for each child, listing specific objectives and procedures.
6. Educational plans are made strictly by professionals.	6. Educational plans are negotiated by professionals with students and parents.
7. Responsibilities for implementing educational plans are relatively unspecified.	7. Responsibilities for delivery on individualized education programs are clearly specified.
8. Disagreements about educational plans are essentially decided locally by professionals—with no formal "hearings."	8. All parties to educational plans for a child have a right to impartial hearings and appeals, if necessary, in case of disagreements.
9. Children are examined by psychologists and other specialists by referral from teachers and principals.	9. Children and their school situations are assessed only on concurrence of school officials and parents.
10. School records are not reviewable by parents.	10. School records of each child are fully open to review by the parents.
11. Most parent conferences with exceptional children are arranged by special education teachers and supervisors, social workers, or psychologists.	11. Regular teachers play a central leadership role in most parent conferences.

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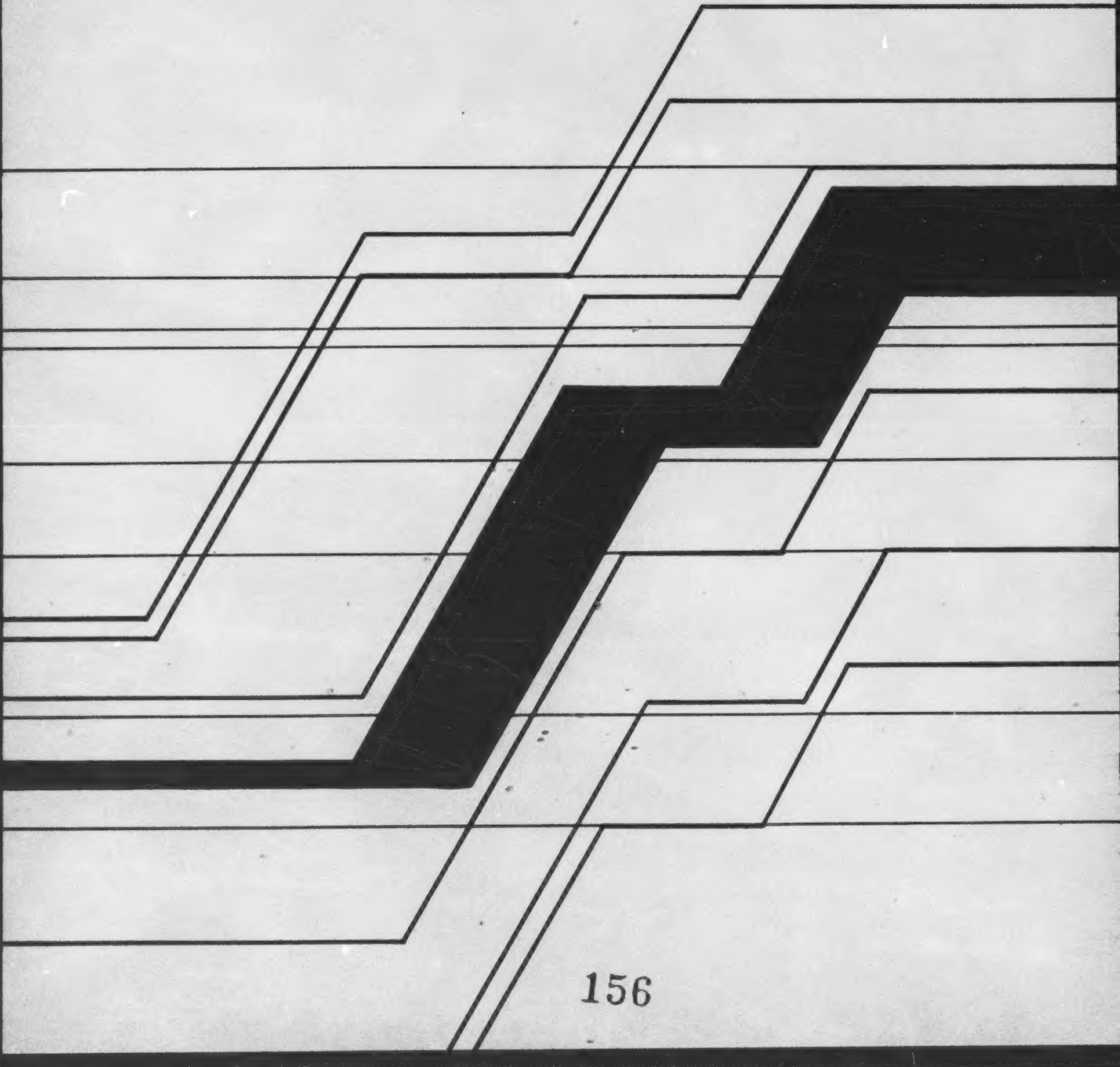
CHAPTER 5

Slowed Cognitive Development



Chapter Outline

- The Challenge to Educators
  - Health and Social Welfare Considerations
  - Educational Considerations
    - Preferred Terminology and Usage
    - Degrees of Mental Retardation
    - Mainstreaming

- The Person Who Is Called Mentally Retarded

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The Challenge to Educators

Two challenging themes run through this chapter. First, cognitive development is a dynamic, developmental concept. The rate of cognitive development is subject to change through education and other environmental influences, even in those cases where development is very slow and the person may be considered mentally retarded. Many who are retarded in cognitive development need not remain so, and some retardation need not occur in the first place.

Retardation is not necessarily permanent.

Second, the more that is learned about so-called mental retardation, the less reason there seems to be to distinguish it sharply, for educational purposes, from conditions like learning disability and emotional disturbance.

The views reflected in these two challenging themes run counter to many historic ideas; they are relatively new. They influence how educators are trained and how children are taught. They challenge convention and arouse controversy, for not everyone agrees that these themes are fully validated. Yet they demand our attention. But before going further, a brief excursion into the background of slowed cognitive development, or mental retardation, is advisable.

Health and Social Welfare Considerations

The first reasons for defining mental retardation were legal and medical. During the 19th century courts took official note that mentally retarded persons required special consideration. About the same time, physicians began serious efforts to analyze and treat the condition.

It was apparent early that certain persons required guidance and protection because they showed poor insight and did not profit readily from experience. They were easy prey to the unscrupulous. They failed to attend to their own health, dress, and safety from the elements. They made unreliable parents and workers. If they inherited money or property, they did not manage it well. The courts in the 18th and 19th centuries termed this cluster of characteristics mental retardation (or deficiency). It meant inability to look after one's affairs and to plan one's future with ordinary prudence and sound judgment. The courts appointed guardians for persons of means who were judged to be mentally retarded. Those who had no assets or families to care for them were placed in asylums or allowed to roam as beggars.

Mental retardation was first observed in personal and social actions.

The 20th century, particularly its second half, witnessed heightened concern for all retarded persons. With the recognition that special education could improve judgment, planning, and daily living skills, the approach to mental retardation changed appreciably. Instead of being considered a static condition requiring guidance, supervision, and sometimes custody, a dynamic view of mental retardation emerged. People, including those who might be considered retarded, could learn to behave more intelligently, through special instruction, whether or not their intelligence quotients went up. The right to a special education became an issue, as did all other personal and civil rights of retarded persons. That issue was settled (see Chapter 1). The result projected persons with mental retardation into full and first class citizenship.

Medical interest was in cause, cure, and prevention.

The more extreme, rare, and highly visible forms of mental retardation excited physicians' attention in the 19th century. Complex medical terms were invented to describe them. Since physicians were particularly interested in causes, some of the newly coined terms combined descriptions and implications of cause. An example is *hydrocephaly* or enlargement of the cranium due to pressure from cerebrospinal fluid whose drainage passage into the rest of the body is blocked. This pressure can limit development of the cerebral cortex, which can result in some degree of mental retardation.

Other terms simply told how the retarded person looked. *Mongolism,* for example, is a genetically linked condition that limits to varying degrees the maturation of a number of body systems, including the central nervous system. Physically, the individual tends to have an external eye structure resembling that of Orientals, hence the name. The condition is now called *Down's syndrome* after the physician credited with first describing it.

The custom of the health professions was to indicate the gravity of any condition in a systematic way. Degrees of retardation were described as borderline, moron, imbecile, or idiot. Later, more general terms were used: mild, moderate, severe, and profound.

Efforts to understand, prevent, correct, or ameliorate mental retardation have met with increasing success. Some of the causes are now under almost complete control. An example is *cretinism,* or mental underdevelopment arising from thyroid insufficiency in early childhood. Some problems can be anticipated before birth by amniocentesis. A sample of the fluid that surrounds the unborn child is drawn off and analyzed. Clues from the analysis sometimes can lead to preventive measures. Some other retardation-producing anomalies yield to surgery or special diets.

Medical advances increase the incidence of disabilities.

At the same time, medical advances also contribute to an increase in the number and kinds of mentally retarded persons each year. New types may occur as the result of side effects of new medications, like the thalidomide babies of the late 1950's and early 1960's (Dacarie, 1969). Numbers increase when improved care in general decreases infant morbidity.

Changes in how society has viewed persons called "mentally retarded" can be inferred from the alterations in the name of the major United States professional and scientific organizations devoted to the study of slow cognitive development. Past names of the association and the dates of adoption are as follows:
1876—Association of Medical Superintendents of American Institutions for Idiotic and Feeble-Minded Persons
1906—American Association for the Study of the Feeble-Minded
1938—American Association on Mental Deficiency
1976—(Proposed Change) American Association for Mental Development (Sloan & Stevens, 1976)

The boundaries of the unknown are pressed back a little more each year. Because of the variety and multiplicity of causes, however, it is doubtful that one can expect a major breakthrough that would eliminate the condition of mental retardation, as in the case of poliomyelitis a few years ago. In the meantime, mental retardation continues to be defined for health workers in terms of its causes and in terms of the degree to which it is present.

Most retarded persons need only occasional help of the same kinds that others might receive from social welfare agencies because of family breakups, economic crises, and other disruptions. However, some have major needs which, in the past, were often met by placement in special residential institutions. Since 1965, though, the nation has seen a sharp increase in the return from segregated residential institutions to homes in large and small communities for youth and adults with more evident degrees of retardation.

Community living arrangements move into the mainstream.

Group living arrangements, where 8 to 16 retarded persons enjoy a homelike, family-style setting under general supervision by live-in adults, are growing as an alternative to institutional life. Social welfare personnel (social workers, rehabilitation counselors, or psychologists) locate, plan for, and manage groups in community living arrangements. Support comes from civil authorities and local affiliates of the National Association for Retarded Citizens.

Social welfare professionals' functions are broad, including safety, housing, employment services, and recreation. They operate from a base that requires the acknowledgment of limited cognitive development and its implications for social development so that their clients can be assured of the services to which they have a right.

Deinstitutionalization for retarded children, too, can be cost-effective for the taxpayer, as exemplified by one state's comparative costs for a child who would have qualified for residential institutional placement.

Regular education average annual cost per child:	$1,900
Special education average annual cost for this type of child:	$5,000 to $6,000
Residential institutional average annual cost for this type of child:	over $20,000

Educational Considerations

Understanding medical terminology aids professional communication, but not education.

Teachers and parents interact increasingly with health and social welfare workers, so it is necessary to understand key concepts in their technical language. But, for the purposes of education—for instructional planning, teaching, and evaluation of pupil progress that teachers do every day—the medical and social welfare concepts of mental retardation no longer have much relevance. In fact, in the view of some educational leaders, their use in education may actually be counterproductive.

It is obviously necessary to use the term mental retardation and other technical expressions associated with it in this book. While a transition among educators to more appropriate language and related programmatic change is under way, it is still far from complete. Too, the fact that changes take place in education does not mean that legislatures, lawyers, the judiciary, the health professions, the public welfare professions, the press, and the general public will move away from conventional terms and concepts at the same time or pace. Such moves usually occur over fairly long periods.

Fostering development is the primary concern.

Educators are concerned primarily with fostering development. Their function is first to determine each pupil's present level of achievement, and second, to help each individual pupil enhance and build on those foundations toward higher attainments. In our view, the developmental model of mental retardation implies that individuals with slowed cognitive development should be approached with the expectation that they have potential to grow in knowledge, understanding, and skills. The concept that some persons should be considered categorically unable to benefit from training and education runs counter to this model. It jeopardizes the present and future welfare of individuals so identified, and generates self-fulfilling and self-limiting prophecies.

It frequently happens that a child who is found to be mentally retarded is provided special education to supplement and complement regular education. Improvement is often so substantial that the individual moves into society with enough vocational, social, and personal competence to maintain individual, civic, and family responsibilities with no more outside assistance than anyone else. In such instances there is no longer any justification for considering the person to be mentally retarded.

Instruction can affect degree of retardation.

In other cases, the fact of mental retardation may not change as a consequence of education, but the degree of retardation does. Some pupils' retardation can be ameliorated to a significant degree by persistent, well planned instruction. The pupils may learn to be productive economically in relatively sheltered employment. By means of specialized education they learn to live more fulfilling lives with less need for supervision and assistance.

Preferred Terminology and Usage

If teachers and principals are called on to define mental retardation, they might well say that it is a condition of slowed cognitive development. The term *cognitive* is used here to describe intellectual functioning, as reflected in performance on tests of intelligence, plus academic skills. Students who are low in intelligence and very slow in academic progress are those most likely to be described as mentally retarded by educators. Typically the diagnosis of a child as mentally retarded in the school situation starts with the observation that the child is not progressing well in basic academic subjects; often there are associated behavior problems, either of the "acting out" variety or a special fragility, vulnerability, or general inability to cope with the complex school situation. The child is then referred to a school psychologist who obtains a low score on tests of cognitive functioning which then leads to classification as *mentally retarded* for school purposes. The classification depends mainly on assessments of academic progress and of cognitive functioning. This way of assessing and of classifying is falling into disrepute because it is unfair to many children and it seldom provides educationally useful information to teachers, principals, or parents.

Educational problems deserve educational definitions.

A different approach to definition and classification is used by professionals in most other settings. This should be no surprise. Indeed, it would be a serious mistake to assume that one uniform system of classification ought to serve all purposes. Just as the schools define blindness according to the need of the child for nonvisual reading methods, using a definition-classification system very different from that for determining income tax exemptions as a blind person, so the approach to mental retardation used in the schools is different from that used in other settings for other purposes.

The most commonly cited U.S. definition of mental retardation is that of the American Association on Mental Deficiency (AAMD), as follows: "Mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period" (Grossman, 1977, p. 11). *Subaverage* means a score of two standard diviations below the mean on an individual intelligence test. The *developmental period* begins with conception and ends at the close of the 18th year.

The AAMD's definition and nomenclature are intended to provide a nationally recognized way to communicate about mental retardation. But the AAMD language and standards are not yet really in general use. Taylor (1980) analyzed the two journals published by AAMD for the years 1973–1979 inclusive (566 articles). He found that "only 28 per cent of the research articles . . . used the classification system sanctioned by the Association." It is a serious mistake when a definition, such as that provided by the AAMD, is used as the standard or preferred approach for making educational classification and placement decisions. Indeed, no agency of any kind could properly make decisions about individuals simply on the "basis" of the AAMD classification

Studies over several decades (Kirk, 1964) show that educable mentally retarded (EMR) students in special classes tend to score even lower on reading ability than they do in mental ability. If the students had been selected for EMR classes strictly on the basis of their measured intelligence, their scores on reading tests would be expected to regress toward the average, or to be higher than their mental ability scores. Such was not the case. This suggests that the lack of academic progress probably was as critical as low measured intelligence as a factor in the classification and special education enrollment of EMR pupils. Correct educational plans always involve very careful decisions considering individual persons, the alternative assignment options available and how they can be modified. Simple classifications according to abstract definitions which can be changed overnight in "smoke-filled rooms" are not the way to make school program decisions. (Kirk, 1964) system. The Taylor review makes it plain that there is not anything approaching consensus on a definition of mental retardation which is used consistently by researchers, much less by professional workers.

"Adaptive behavior" distinguishes the AAMD definition.

The distinguishing characteristic of the AAMD definition, making it somewhat different from approaches used in the schools, is the adjunctive reference to "adaptive behavior" in addition to subaverage intellectual functioning. Adaptive behavior is a measure of how fully a person satisfies the criteria of individual independence and social responsibility expected at a given age and in a given social group. As represented in Figure 5–1, a person would be considered retarded only if both measured intelligence *and* adaptive behavior showed substantial attenuation.

One approach to specification of the meaning of adaptive behavior has been provided by Mercer (1974). She points out that children live in four social systems: the family, the neighborhood, the school, and the community.

> In these social systems the number of roles and the level of expectation for performance increases with age. Increasing societal expectations are conceptualized as having three underlying themes: increasing complexity in the nature of the performance expected; the expectation that role performance will be more motivated by internal than external controls; and expanding independence and freedom from adult supervision in role performance. (pp. 172–173)

Mercer (1974) has also described the Adaptive Behavior Inventory for Children (ABIC) to be used in the 5 to 11 year range. It is administered by asking a prescribed set of questions of the child's mother or other chief

FIGURE 5–1
Adaptive Behavior/Intelligence Interaction[*]

		Measured Intelligence	
		In Retarded Range	*Not in Retarded Range*
Measured Adaptive Behavior	*In Retarded Range*	Possibly Mentally Retarded	Not Mentally Retarded
	Not in Retarded Range	Not Mentally Retarded	Not Mentally Retarded

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[*]Adapted from Grossman, 1977, p. 13.

caretaker. The questions uncover the child's present social role behavior. According to Mercer,

> When clinicians speak of social adjustment, social maturity or social competence, they refer to an individual's ability to play ever more complete social roles in a progressively widening circle of social systems. As a person matures, the behavioral standards of society become more demanding and the number and complexity of social roles which he is expected to play increases. His ability to cope with these increasing expectations for social role performance constitutes his adaptive behavior. (p. 172)

Mercer's approach to the definition of mental retardation, in particular her explication of an approach to the adaptive behavior concept, may be useful in a socio-legal context, but it is not a defensible approach to classification and educational programming processes in the schools.

The AAMD Adaptive Behavior Scale is another approach to the measurement of adaptive behavior as called for in the AAMD definition of mental retardation. The scale allows a detailed assessment of a person's personal and social competencies under the demands of ordinary day-to-day life. It helps to identify both adaptive and maladaptive behaviors (Fogelman, 1975). Such a scale may be useful to teachers and parents in assessing needs and progress of students.

Public school definitions of mental retardation vary from state to state.

The inconsistencies between the mental retardation definitions used in the public schools and those adopted by national groups like the AAMD have their roots in the differing purposes of the schools and of national professional and scientific agencies. The latter define mental retardation for research and for public information purposes. The schools, on the other hand, define retarded children for the purpose of service delivery, and even more precisely, for the purpose of *special educational* service delivery (MacMillan, Meyers, & Morrison, 1980). One consequence is that some school children who fit the AAMD definition are not considered retarded in school, while others are considered retarded in school but not so according to criteria of the AAMD definition.

Degrees of Mental Retardation

For purposes of efficient communication, mental retardation is often spoken of as having four degrees: mild, moderate, severe, and profound. Though their boundaries are neither sharp nor finite, the four degrees have traditionally guided how educational specialists and other concerned professionals have talked about mental retardation.

Degrees of retardation are recognized.

Table 5–1 describes what the four levels mean in terms of attainments during three periods of life. This table builds on one devised by Sloan and Birch (1955) in which the adaptive behavior concept was first introduced. A noteworthy aspect of the table is that it can be read in several directions, and with differing interpretations. If read horizontally, the image of the retarded person becomes quite static; one simply gets a picture of how the retarded person

TABLE 5–1
Behavior Associated with Degrees of Retardation[a]

Level	*Preschool age (0–5)* *Maturation and Development*	*School age (6–21)* *Training and Education*	*Adult (21 +)* *Social and Vocational Adequacy*
Mild	Develops essentially normal social and communication skills; minimal retardation in sensorimotor areas; rarely distinguished from normal until later age if positively nurtured and stimulated during this period.	With individualized instruction learns academic skills to about 6th to 7th grade level by late teens; learns general elements of high school subjects.	Becomes socially and vocationally self-sufficient after appropriate education and training; may need specialized counseling and guidance when under serious social or economic stress; profits from continuing education.
Moderate	Talks and learns to communicate simply and with noticeable delay; acquires social awareness slowly, with encouragement; fair motor development; profits from instruction in self-help leading to independence; can be managed like most children this age, but needs increased supervision.	With individualized teaching, learns functional academic skills to approximately 4th to 5th grade level by late teens; acquires basic social skills and independence in travel and in daily life.	Reaches self-maintenance, usually in unskilled or semi-skilled occupations; is helped by mentor and advocate style friendship and guidance, especially when under mild social or economic stress. Attains responsible family and community roles through church and related support structures.
Severe	Awkward but improvable motor development; language and speech is minimal, but responds to instruction; profits at slow but significant rate from training in self-help; acquires survival forms of communication skills.	With individualized instruction, learns to communicate; acquires elemental health habits; learns survival reading skills and social behavior; profits from recreational training (i.e., dancing) and social habit training.	Contributes partly to self-support under sheltered living and work conditions; develops self-protection understandings and skills to a useful level in controlled environment.
Profound	Gross retardation in language and social interaction; minimal functioning in sensorimotor areas; responds to basic behavior shaping instruction and benevolent nursing care.	Develops limited volitional motor control (e.g., to assist in feeding self); learns to work with aides in self-help and personal care, but requires constant assistance.	Acquires motor and speech development sufficient to cooperate with aides who attend to feeding, personal needs, and elementary recreation (e.g., music, rocking, swinging); needs full care and supervision.

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[a] This is an adaptation and update of a table from A Rationale for Degrees of Retardation, by W. Sloan and J. W. Birch, *American Journal of Mental Deficiency*, 1955, *60*, p. 262.

may be expected to behave differently—in some minimal way—with increasing chronological age. If school programs are viewed in this horizontal perspective, the retarded person is "tracked" into a profound, severe, moderate, or mild curriculum design with little expectation of change. This kind of tracking is doubtful both professionally and legally.

On the other hand, the figure can be read with a vertical orientation, or possibly with a partially vertical or slanting orientation. According to this reading, one might attempt through time, very careful diagnosis and intensive instruction to raise the individual from a profound to severe level or from moderate to mild level. The retarded person's development is not considered to be totally predictable from childhood to adulthood and the educational program is considered to be flexible. Students are not "tracked" irreversibly. Changing views of mental retardation enable educators of recent generations to read life cycle developments vertically or more hopefully than in the past.

The educational program remains flexible.

It should be recognized, of course, that the four levels of retardation are used simply to facilitate communication. As Dunn (1973, p. 70) pointed out: "Clearly there are no sharp distinctions between persons falling on either side of the various demarkation lines. However, these . . . general descriptions . . . have emerged over the years as having most meaning for persons involved in behavioral (educational, psychological, social, vocational) interventions."

Mainstreaming

Previously accepted patterns of educating mentally retarded pupils in separate special classes or schools now are giving way. Children and youth, without regard to labels, are more and more frequently merged for instruction and all other school related activities.

Children and teachers are deployed in new ways.

But some separate classes for mentally retarded pupils remain. Also, some separate day schools and residential schools continue, with altered functions. Instructional organizations wherein retarded pupils spend part time in regular groups abound under names such as resource or clinical rooms or centers.

There appears, however, to be an accelerating tendency (a) to move children from existing special classes and schools into regular class groups and to bring special education materials, facilities, and specialist staff along with them to form teams with regular teachers; and (b) to identify pupils who show slow cognitive development at school entry, and to maintain them in regular classes with special education support services, thus sharply reducing the flow of new pupils into existing special classes.

Wang (1981) reported that educable mentally retarded pupils 100% integrated in regular kindergarten through third grade classes made as much—and sometimes more—progress in reading, mathematics, and independent learning behavior than did equivalent pupils who received special education in resource rooms, when the Adaptive Learning Environments (ALEM) curriculum and procedures were used. The same was true for children classed as learning disabled and as gifted. The exceptional children in regular classes rated their own cognitive competence and self-esteem considerably higher, too, than did their peers who went to resource rooms. Moreover, program cost projections favored the ALEM approach.

The need for generic preparation will grow.

As trends toward inclusion continue, an obvious result will be less need for special categorical classes. The need will grow for special teachers with more generic special education preparation to work in team settings with regular class teachers. The creative concepts that pioneered the early phases of change from categorical to individualized education are working well for what are called "mildly handicapped" groups. These concepts need to be expanded to include *all* exceptional children, becoming broad-ranging enough to continue to guide education and service delivery for everyone at all school levels.

Sontag (1976) stressed the need for continuous and rigorous reexamination of even the newest concepts about where and how special education may best take place. Quite specifically, he questioned the supposition that severity of handicap should be a major criterion for determining the extent to which physical, social, or instructional mainstreaming is feasible. Rather than the severity of the handicap, it is the complexity of the educational program needed and the portability of that program that are the crucial criteria to be applied.

The Person Who Is Called Mentally Retarded

David Jones' story, first published in 1976, has much in common with those of other young people classified as retarded (Dinger, 1961) and brings focus to the central task of bringing high quality education into all schools for all students.

David's Story[1]

David's story illustrates progress.

David was the second of six children born to his parents. A 3 lb., 8 oz. baby, he was born prematurely after a pregnancy of only six and one-half months. His early development, both intellectually and physically, was slow. He sat up at one year, walked at three, and began to speak at five. After unsuccessful attempts at school in Germany and in Denver, Colorado, David was admitted to the State Home and Training School at Grand Junction, Colorado on November 30, 1964 at the age of eight.

Almost 11 years later, a confident young man, David was released from the Training School to seek his place in the world, not as he entered, but as an ambitious youth ready to face success or failure on his own.

During the course of his 11 years at the School, David progressed through numerous training and therapeutic programs, both with the institutional

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[1] Smith, 1976, pp. 7–8.

Certainly, in 1964, mental retardation would have appeared to many to be an accurate assessment of David's status. Yet, if other psychologists, educators, and physicians, in other locations, had studied David at that time he might well have been considered either learning disabled or brain injured rather than mentally retarded, based on the same evidence. The important thing was David's educational program, not his label.

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school and in the public school system. David, who attended Grand Junction High School, is one of a small number of institutionalized persons who have scored a touchdown for a state championship caliber football squad.

One of David's earlier adventures was as a Scout, when he was selected to attend the National Jamboree, traveling to Idaho in the process. David later became a member of the State Home and Training School's Jaycee chapter, the first organization of its kind to be based upon the campus of a residential school for the developmentally disabled.

Family ties were maintained.

David's family has maintained a close interest in his progress through the Training School, often contacting David by telephone and arranging for visits to various family members from as distant a place as Georgia and California.

At the time of graduation in the Spring of 1975, David had participated in the school district's "Work Experience-Study Program" and had improved both his work and academic skills. His teachers estimated his reading level at between the 3rd and 4th grades and his arithmetic skills at the 5th and 6th grade level. He had completed Driver's Education, earned letters in football and track, and had been selected as the "Spirit King Award" recipient and reigned over one of the school dances. He had also been recognized as an outstanding local student by one of the local banks. His formal educational program, which began in the institution, progressed far beyond what was thought possible when he was admitted in the mid 1960's.

David's participation in the Work Study program included work activities as a grocery carry-out clerk, a dishwasher at the fraternal lodge, and as a clean-up man for a local drug store. With the money earned at these various endeavors, he has opened a private checking account and is making his own purchases in the community.

Total independence is the long range goal.

A few weeks prior to his release from the Training School David expressed his great desire to become totally independent and a realization that he has much to learn in order to become so. He stated a reluctance to brag about his achievements but also pointed out that many students in "Special Education" can surprise others if given the chance to show their abilities. He spoke of his long range goals of working in construction or as a grocery stocker or cashier.

David has not yet achieved his goal of total independence and is still living in a somewhat restricted environment, that of a group home. He has, however, been able to move himself out of the institutional setting, both by his own efforts and that of the Training School staff and community programmers. He

> will have his successes and he will have his failures in the months and years ahead, but David Jones' story is one worthy of notice. (Smith, 1976, pp. 7–8)

Education improved performance.

David's early childhood status might have been "severely retarded"; with improvement brought about by education, training, and strong motivation, however, his performance more nearly approached the borderline between "mild" and "moderate." And his development can continue. As Grossman (1977) suggested,

> An individual may meet the criteria of mental retardation at one time in life and not at some other time. A person may change status as a result of changes or alterations in his intellectual functioning, changes in his adaptive behaviors, changes in the expectations of society, or for other known or unknown reasons. (p. 14)

The Origins of Slowed Cognitive Development

What is known about the origins of slowed cognitive development can be organized under three broad headings. First, some mental retardation, or slowed cognitive development, is based in organic or physical causes that can appear before, during, or after birth. The resulting retardation is often at the severe and profound levels. This group accounts for 10% to 15% of persons who are mentally retarded. It includes retardation resulting from chromosomal disorders, inborn errors of metabolism, infections during the fetal period, and such other factors as prolonged high fever in illness and loss of access to oxygen.

Physical impairments can hide potential.

The impact of organic factors in cognitive development is relatively unpredictable. The uncertainty comes from two sources. One is the nature, the timing, and the site of the organic or physical cause. Another is the disguising quality a physical impairment sometimes has. For example, a child who cannot communicate, and who appears profoundly retarded, may prove to have very good cognitive potential, if it can be reached and made functional. The classic example was Helen Keller. (More about this concept appears in Chapter 11, which focuses on severe and profound impairments.)

A bleak environment can discourage development.

Second, some mental retardation results from severe stimulus deprivation beginning in early childhood and continuing into the early school years. The following demonstration illustrates this category.

Fifty-eight 15-month-old Black baby boys from District of Columbia poverty areas were engaged in an investigation of response to cognitive stimulation. Two approximately equivalent groups were formed. The stimulated group, 28 in number, started with an average intelligence quotient of 105.[2] The others, who were to proceed as controls without any special intervention, began with an average intelligence quotient of 108.

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[2] Intelligence tests at this age have limited predictive ability and reliability, even when carefully administered on an individual basis by experts. They are, however, useful instruments for group studies of this kind.

Eight women college graduates with inner city experience were given 3 months of training and assigned as tutors. The cognitive stimulation was done in home visits of 1 hour daily, 5 days a week, for 15 months, by which time the infants had reached 3 years of age. The stimulus content included conversation with the child, teaching new words, showing and discussing pictures, singing and playing records, reading to the child, taking walks, helping work simple puzzles, and coloring. Families could cooperate if they wished and were encouraged when they did.

By age 3 the average intelligence quotient of the stimulated group remained the same, 105. The control group's average IQ had declined steadily from 108 to 88, a total of 20 points below what it had been 15 months earlier. The study's director, Earl S. Schaefer, attributed the difference to the lack of daily stimulation, which emphasized linguistic, reasoning, and observational stimuli of a cognitive nature (National School Public Relations Association, 1970). This is not an isolated study, but rather one that points in the same direction as several others (Garber, 1975). Lack of suitable stimulation in very early childhood can create mental retardation in children who begin life with average intelligence.

Stimulation built and maintained language and thinking abilities.

The effects of deprivation are erratic. They may differ from child to child, depending on what areas of development suffer most deprivation. Also, a number of studies strongly suggest that if the early childhood opportunity for cognitive stimulation is lost, it may never be entirely regained through later remedial efforts.

There may be limits on the positive, upgrading effects of externally imposed stimulation or education. These may vary from individual to individual. But if daily experiences are consistently enriched in a warm, sensitive, and observant situation, there seems to be no way youngsters can be harmed by it.

On the other hand, there appears to be no limit to the extent to which stimulus deprivation can have negative, retarding effects. This assumption has not been explored scientifically in human infants and young children, for obvious reasons, but cases on record of extreme child abuse support the notion that early and continued deprivation can have a profound and lasting decelerating impact on human development.

Third, some mental retardation may be a natural consequence of the broad way in which human intelligence is distributed in the species. As in many other characteristics, it is normal for human beings to show a wide range in intelligence. Even within a given family, members typically span a wide spectrum of capacities. The environment-heredity aspect of the matter is obfuscated by related factors that are often equally clouded: race, economic level, cultural differences, language differences, prior education, stimulation deprivation, and social class. Birth order and the spacing of children have both been shown to be correlated with degree of intelligence, too, if only slightly. There is certainly room for continued research aimed at sorting out these and related matters, and at learning how education might be used to improve cognitive development.

Some mental retardation is a "natural" attribute of the normal range of human abilities.

Technology and Special Procedures[3]

For pupils who show slowed cognitive development, individualization consists of the proper mix of the same elements required by all other pupils. Curriculum, teaching methods, and instructional materials effectively organized for instructional impact in a suitable setting are the key conditions, whether in kindergarten, twelfth grade English, driver education, fifth grade social studies, industrial arts, vocational education, or studio arts.

Curriculum Individualization

No curriculum for pupils who show slowed cognitive development differs completely from the typical. *A few curricular elements need more emphasis.*

Historically, three forms of curricular adaptations for pupils with slowed cognitive development can be identified. They date from the beginning years of this century when separate schools and classes for the retarded began to be opened.

Early technology emphasized pupil limitations.

First, the regular curriculum was slowed down. To illustrate, the introduction of long division or sentence diagramming might be put off a few years from its usual spot in fourth or fifth grade for 10 and 11 year olds to later years for retarded pupils

Second, the regular curriculum was simplified. For instance, in social studies related to North America the material about Eskimos might be passed over lightly or omitted and the content regarding the United States given more prominence. In arithmetic, decimals might be taught only to 2 places because that is all that is necessary for basic knowledge about money.

Third, the regular curriculum was given a tighter structure. Because of the slowdown in the flow and introduction of new material, and because of the simplification of the material introduced, it became possible to dwell longer on what was being taught, to break it down into smaller parts, to sequence the elements more carefully, and to review it more frequently, more thoroughly, and in more varied ways.

Categorical thinking conditioned curriculum thinking.

These three initial steps toward curriculum adaptation for retarded pupils (slowdown, simplification, and tight structure) were followed by attempts to formulate unique curricula for pupils who were considered to have different degrees of retardation. For example, pupils regarded as educable had curricula designed especially for them. Content was not to be simply watered down from that provided for other pupils. Serious efforts were made to match it to what were thought to be the learning characteristics of educable mentally retarded pupils. Those curricula evolved to the point that it was possible to study and characterize them. Regarding curricula for educable mentally retarded children, for instance, Kirk (1972) said:

> In broader concepts, the program should stress the development of (1) social competence, (2) personal adequacy, and (3) occupational competence. Social

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[3] In a great many cases, these technological and procedural matters are applicable, too, with children called learning disabled or emotionally disturbed.

> competence refers primarily to the ability of the individual to get along with his fellow men, that is, his family, his school and neighborhood mates, and other members of the community. Personal adequacy refers to his ability to live with himself in some sort of equilibrium. Occupational competence refers to his ability to support himself partially or totally in some productive activity. (p. 198)

Essentially the same group of children were referred to by Dunn (1973, pp. 164–165) as "children with mild general learning disabilities." He concluded that curricular objectives for them fall into four broad areas: "(1) basic readiness and practical academics development; (2) communication, oral language, and cognitive development; (3) socialization, family living, self-care, recreational, and personality development; and (4) pre-vocational and vocational development, including housekeeping."

Objectives emphasized practical skills.

After reviewing the earlier conclusions of Kirk and Dunn, both of whom had also drawn on other key writers (Kirk & Johnson, 1951; Kolstoe, 1970; Smith, 1968), a summary by Hewett and Forness (1974) concluded that "the focus of special education for EMR children, then, is on (1) developing basic academic skills, (2) social competence, (3) personal adjustment, and (4) occupational adequacy" (p. 83).

These summaries represent the evolution of thinking about curricular objectives for the so-called educable mentally retarded from the 1930's to the 1970's. They show that thought had been given to individualization, as the concept was then understood. The summaries also show the very practical, outcome-oriented character that was a large part of curriculum development for all children during the same time span in American education. Special education objectives showed a clear linkage to the general objectives of education most widely accepted during the same period: self realization, economic efficiency, civic responsibility, and good human relations (Education Policies Commission, 1938).

It is not surprising, therefore, that early curriculum guides for trainable children came into being as quite separate documents from curriculum guides for educable children (Baumgartner, 1960; Rosenzweig & Long, 1960). The new materials were not to be simply downward extensions of already existing curricula for educable retarded children. There was a prevailing and strongly held belief that a real distinction existed between educable and trainable, and that the distinction was functional and not arbitrary, and therefore had significant bearing on the design and operation of programs.

"Trainable" was then considered equivalent to "severely retarded."

The distinctions among "educable," "trainable," and "untrainable" were based on predictions about the presumed levels to which the children could be educated. The ability to attain functional literacy was supposed to separate the educable from the trainable. The ability to gain bowel and bladder control and functional language were criteria that divided the "trainable" from the "untrainable."

Actual assignment to a group by psychologists was most often made on the basis of the child's measured intelligence. The prevailing intelligence quotient boundaries tended to be: educable, 75–50; trainable, 50–25; and untrainable, below 25. Decisions based on such data are not acceptable today.

A major scholar of the subject early in the 1970's (Kirk, 1972) concluded:

> The general objectives of the curriculum for a trainable child are ... (1) the objective of developing self-care or self-help, (2) the objective of developing social adjustment in the home and neighborhood, and (3) the objective of developing economic usefulness in the home or in a sheltered environment. These constitute the broad goals of the educational program for trainable mentally retarded children. (p. 230)

Retarded children were learning more than had been anticipated.

Shortly thereafter another leader addressed the same question (Dunn, 1973). He first noted that "behavior modification techniques are enabling us to teach more than was previously thought possible to this middle (i.e., trainable) group" (p. 101). Then Dunn called attention to an emerging terminological change: The trainable group was being referred to as semi-independent rather than semi-dependent, showing what he interpreted as "a subtle but important attitudinal change." In that light, and in view of what he reported as a gradual extension of the intelligence quotient range of this group "upward toward IQ scores of 55, 60, and 66," he said:

> Curricular objectives have been broadened considerably to include the following four rather comprehensive goals:
> (1) Self-help, basic readiness, and independent living skills development.
> (2) Communication, language, and cognitive development.
> (3) Socialization and personality development.
> (4) Vocational-, recreational-, and leisure-skills development. (p. 101)

The next year a summary appeared (Hewett & Forness, 1974) that recapped the previous two, but also mentioned oral language development: "Emphasis is on (1) oral language development, (2) self-help skills, (3) socialization, and (4) preparation for living and working in sheltered environments" (p. 84).

Examining those objectives out of the context of this chapter leaves few clues as to whether they are intended for bright, slow, or average children. The mention by Kirk and by Hewett and Forness of the "sheltered environment" may be taken as a hint. But even that is indefinite. Who does not live in a sheltered and sheltering environment, for the most part? An experience with Outward Bound or a similar survival training program would convince many on that point.

The process dimension was added.

One fresh perspective of the 1970's suggested that two skills are necessary in all curricular areas. They are (a) *thinking critically,* being able to assess the realities of a given situation together with the implications, and (b) *acting independently,* making decisions based on realities and following through on those decisions (Goldstein, 1974; Heiss & Mischio, 1971). It was argued that to become an independent adult, the youngster called "retarded" would have to learn problem solving methods that apply in generic fashion to academic, personal, social, vocational, financial, and leisure situations. That kind of thinking emphasizes (a) the teaching of processes, and (b) the value of teaching those processes to exceptional children and other children together.

With contemporary instructional technology and procedures, the older distinction between "educable" and "trainable" is difficult for teachers to apply. They have no reason to think of children as divided into those categories. Each child is taught using those methods and materials the teacher regards as most appropriate.

A learning continuum replaces formal boundaries.

Newer curriculum guides include the whole spectrum of objectives. They supply enough detailed developmentally sequenced acitivities to allow the inclusion of children of all levels of retardation *as well as other children.* Children with slow cognitive development and all other children can be accommodated within the same differentiated curriculum without subclassification as "educable" or "trainable."

Stephens (1978), for example, offers a broadly useful social skills curriculum coupled with teaching strategies based on social modeling, social reinforcement, and contingency management. He also outlines an assessment procedure that evaluates strengths and weaknesses in 4 broad fields and 30 subcategories, namely:

The development of socially adaptive behavior shows growth in intelligence.

> *Environmental Behaviors:* Care for the Environment, Dealing with Emergency, Lunchroom, and Movement Around Environments
>
> *Interpersonal Behaviors:* Accepting Authority, Coping with Conflict, Gaining Attention, Greeting Others, Helping Others, Making Conversation, Organized Play, Positive Attitude Toward Others, Playing Informally, and Property: Own and Others
>
> *Self Related Behaviors:* Accepting Consequences, Ethical Behaviors, Expressing Feelings, Positive Attitude Toward Self, Responsible Behavior, and Self-Care
>
> *Task Related Behaviors:* Asking and Answering Questions, Attending Behavior, Classroom Discussion, Completing Tasks, Following Directions, Group Activities, Independent Work, On Task Behavior, Performing Before Others, and Quality of Work.

Teaching Methods

No teaching methods apply uniquely to retarded pupils.

Teaching methods and procedures for pupils who are slow in cognitive development have much in common with those applicable for other children and youth. Three points should be noted especially with regard to organization for instruction of pupils who show slowed cognitive development.

1. They often need to be taught deliberately what others "pick up" by incidental learning. That may apply to how to organize books so they will fit easily into available space, how to use a pencil sharpener correctly, or how to button one's coat against the cold. They do learn, however, if given specific, painstaking, and consistent instruction.

2. They are often capable of more and higher levels of learning than may at first appear to be the case. Thus, there should be plenty of opportunity to go ahead in any curriculum sequence, whether it be creative activities like graphic arts or sculpture, or driver education and reading comprehension.
3. While acknowledged to be slower starters, these pupils do go on learning throughout their lives if given the incentive and chance. Thus, it is important to be able to carry curricular offerings beyond the years usually associated with secondary school graduation.

Planning is essential.

The key to effective organization for instruction is planning. The most fundamental requirements for planning are time to do it and know-how about effective planning procedures.

> Extremely heterogeneous classes ... place extraordinary demands on teachers' time, attention, and classroom management skills. ... Skilled classroom managers can make many of the adjustments that are necessary ... but less skilled classroom managers cannot. ... School districts should place a high priority on helping teachers of very heterogeneous classes improve their classroom management and organizational skills. (Evertson, Sanford, & Emmer, 1981, pp. 230–231).

Teaching procedures that are effective with other children are also effective with pupils considered retarded if:

Rate your style on these five points.

1. The methods are applied with accommodation to each pupil's state of readiness for instruction.
2. More review and repetition of a varied and interest-holding kind are used to help establish retention.
3. Material to be learned is divided into smaller but still meaningful bits, presented sequentially, and then rehearsed in total, with as little change in order as possible.
4. The learning environment attracts and holds the child's attention.
5. The teacher quite frequently checks to make sure the individual pupil is paying attention or scans the small group for the same behavior.

These five points call for closer and more intensive emphasis on certain details. That is demanding on teachers. The necessity to be more than ordinarily attentive to details and to adapt the usual instruction in many ways argues strongly in favor of well planned joint efforts among teachers, aides, peer tutors and assistants, and parents.

Instructional Materials

Some instructional materials are especially promising for pupils who show slow rates of cognitive development. They help make the adjustments needed to accommodate to a slower pace of cognitive growth: small steps, tight sequencing, frequent review, curricular deceleration, and emphasis on academic essentials and vocational training. They maintain a slower rate of introduction of more complex materials.

A good illustration is the Stanwix House Functional Basic Reading Series (1970). It is really three reading series interlocked. All proceed at developmental rates below the average reader (rates of 75%, 60%, and 50%). The content themes are alike, and all stress social and vocational objectives. Many such materials can be examined in special education instructional materials service centers.

Materials should urge pupils ahead, not hold them back.

Much of the instructional material originally designed for pupils with slower cognitive development rates is now used for other children, too. Pupils of average or higher rates of mental development are often beset by general reading disabilities or by specific learning disabilities. Some of those pupils are recovering, educationally speaking, through their teachers' skilled use of reading series originally designed for use with mentally retarded children and youth.

For pupils with mental retardation, learning is relatively more effective when concrete, rather than abstract, materials are used in the process. For instance, learning to make change occurs (reaches criterion) in a shorter time and is more readily retained if real or play money is used, rather than written or oral illustration exclusively. The same, of course, is true with some other pupils. But pupils with mental retardation usually remain less apt than others regardless of whether concrete or abstract materials are employed. They are *relatively* less disadvantaged when the concrete forms are used.

Concrete materials are helpful.

The technology and special procedures just discussed are essential ingredients successful teachers put together to produce maximum opportunity for each cognitively slow child. In some cases out-of-school services such as transportation, food, medical attention, and community aid and understanding must be developed also.

Effective School System Programs

Tacoma, Washington, population approximately 155,000, was the earliest recorded community to begin mainstreaming. Completely flexible interaction between regular and special education was spelled out in a 1958 report adopted by the Tacoma Board of Education (Tacoma-Pierce, 1958):

Changes began with policy.

> Decentralization provisions for exceptional children should be made in the public schools.... Exceptional children need to live and learn with others; separate facilities make this difficult. Our educational philosophy, psychology and practice are calling for an education together rather than apart.
>
> It must be observed that some children ... need separate and different educational facilities. But even these facilities should have easy access to regular classrooms and children. The emphasis must be on the exceptional child in a general society, insofar as possible. (pp. 145–146)

Model Practices in Tacoma

A solid structure of educational provisions has been built in Tacoma on the foundations of *decentralization* and *progressive inclusion.* Handicapped pu-

"There is only one school system, and it is for all children." (Berness, 1974)

pils have ongoing contact with their nonhandicapped peers during their elementary and secondary school years. "Education together rather than apart" is the standard practice. Special education is available in as close proximity to home as possible for all children who need it. Educable mentally retarded pupils in almost all cases can attend the schools closest to their homes.

At first, children considered retarded were sent from special classes to regular classes for program inclusion. That pattern went through a transition and the focus of responsibility changed. Now the main tendency is for pupils who might be mentally retarded to enter school in regular classes and to continue there. The regular class teacher and the resource teacher determine how much time each pupil needs for instruction from the special education teacher. The regular class teacher accepts responsibility for the handicapped child and knows that help can be obtained from the special education teacher and other school system resources.

Flexibility is a key condition.

Flexible interaction between regular and special education is a central factor. Individual children's schedules change as alterations in their needs are noticed by their teachers. The Division of Pupil Services retains overall responsibility for defining pupil needs in a general sense. But principals, teachers, counselors, parents, and the pupils themselves have broad discretion in adapting local school activities to each pupil's requirements.

Tacoma has deliberately fostered a *quid pro quo* understanding among all faculty that special education teachers will work also with regular grade youngsters who are having educational problems but who might not be classifiable into one of the special education categories.

Special teachers can help with any child.

Objectives for pupils with slow cognitive development in Tacoma are more like those of regular class pupils than they are different. More and more such pupils are instructed successfully for more and more of the school day with regular class pupils. It is similar for both trainable and educable levels. They are programmed to a great extent for learning activities with regular classes on individual schedules.

Tacoma teachers and principals point out that inclusion is fostered by four factors that prevail in the school system:

1. Modified classes reflect curriculum flexibility at all school levels. Ninth grade English, social studies, mathematics, or science for regular students might each have several options, with different units each quarter, so all ninth grade students take social studies but do not all study the same things during that year. The same is true of other subjects at different grade levels.
2. Functional classification is the rule for pupils in need of special education. Children are discussed and planned for in terms of their specific educational assets and liabilities at any one time. Thus, a description like "She reads well at fifth grade level but has number skills and spelling skills at grade 2.5," is the sort of functional statement that is basic for placement for special help.
3. Management of instruction by objectives results in highly individualized teaching for all children. Also, teachers plan and work together to mobilize and apply their own individual strengths in terms of the pupil needs they notice.

4. The "one-ness" of the school system is expressed everywhere. Teachers, supervisors, principals, and all others point out that "every child is a pupil of this school district. We have only one school system and it is for all children."

The four elements are all considered part of the multiple approaches, the multiple options, and the multiple facilities that make feasible the blending of special and regular education.

Parent Involvement

Parents take part.

When decentralization and progressive inclusion were recommended in 1958 there had been broad public involvement in background studies. Parents whose children may be retarded continue to work with school personnel. The emphasis falls on what can be done to maximize each child's education. Fathers and mothers are encouraged to react to individualized education programs as proposed by teachers and principals.

It is necessary that parents give written approval for their children to enter special education programs. Tacoma began obtaining such written approvals before they were required. Most contact with parents is in connection with planning and reaching agreement on their children's projected school activities.

Maximum use is made of school social workers, counselors, and school psychologists in direct, interpretive contacts with parents. It is emphasized that the role of the psychologist goes far beyond testing and writing reports. Often the psychologist is the key person in the interpretive session with parents.

Preparation of Teachers

Regular teachers receive special training.

It was recognized at the outset that not all regular class or special education teachers would be immediately ready for the new responsibilities accompanying mainstreaming. Short courses and workshops were made available for regular teachers who were scheduled to have exceptional children in their classrooms, a new experience for both child and teacher. They were conducted in local schools, and the professors were volunteers from the Tacoma professional teaching staff. Tied together as an inservice Micro-College, 10 class hours equaled one professional credit. Professional credits led to advanced qualifications and increments in salary.

The Micro-College flourishes. A sample from the more than 20 courses offered in one fall term follows (each course was 5 hours long):

Instructional Materials Sharing
Classroom Organization: Scheduling, Room Set-Up, Time
Integrating Exceptional Children into Regular Classes
Slow Learners in the Classroom
How to Interpret Individual Tests (e.g., WISC, Binet)

Individualized Elementary Math
Counseling Techniques in Parent Conferencing
Career Exploration: Junior and Senior High School

Minicourses proved especially valuable when directed at helping special education teachers gain skill in giving technical assistance.

By now, effective management in regular classes of pupils who appear retarded is the rule rather than the exception. All teachers can ask for and expect to receive helpful consultation from special education teachers with a view to providing the needed education for pupils showing slowed development. Regular teachers seldom suggest now that retarded children be removed completely from their rooms. When that does seem necessary, the request is usually made on the basis of a jointly planned educational program.

The collective bargaining contract reflects the policy of mainstreaming.

Functional grouping of children is accepted in principle by Tacoma's professional staff. The Professional Agreement between the school district and the Tacoma Alliance of Teachers includes the statement: "It is agreed that multiage grouping is a desirable form of school organization" (p. 52).

The flow of pupils between regular and special education teachers is in both directions. There are pupils in regular grades whose academic performance or social behavior puzzles their teachers. Special education teachers respond directly in such cases, giving assistance in assessing and suggesting remedies to be tried by regular class colleagues. It is not strictly a one-to-one exchange; the total school faculty grows to expect all members to share their competencies and resources.

Decentralization and progressive inclusion are practiced.

Mainstreamed retarded pupils in Tacoma start the day with all other children in heterogenous report rooms. They are carried administratively on a special education teacher's roll in order to assure accurate accounting for state report purposes. However, approximately three-fourths of the city's children classed as retarded are physically in regular report rooms each morning. They remain with other pupils for varying portions of the day, leaving only for special instruction that cannot be provided otherwise. Decentralization and progressive inclusion function as operating principles and practices in Tacoma. The first has been accomplished to the extent feasible with contemporary educational technology. The second, progressive inclusion, is well established, widespread, and growing.

High School Programs that Work

Providing high school programs in which young people considered mentally retarded can function as accepted and involved members of the student body frequently surfaces as a difficult problem. This section offers some clues as to how successful high school programs begin and how they operate.

Starting in a Suburban High School

McCarthy and Stodden (1979) explained what they called "mainstreaming reversed" as a way to achieve realistic integration of cognitively slowed stu-

A Virginia group has rap sessions for brothers and sisters of mentally retarded persons. The main idea is to help them know they are not alone in how they feel, both positively and negatively, and to share practical advice on handling specific situations involving their siblings. Some were reluctant to attend the first meeting but subsequent sessions held to almost 100% attendance and participation. For added information, contact Deanna Shoob, President, CAPS, P. O. Box 1217, Springfield VA 22151.

dents. It started with two self-contained classes in a suburban high school. There were 19 intellectually handicapped students, 2 special education teachers, and a paraprofessional. The students were 16 to 22 years old with intelligence quotients from 40 to 65. They ranged from complete nonreaders to fifth or sixth grade reading skill. Other academic areas varied just as widely.

Integration into regular classes was limited and arranged only on an individual basis. Few special students were able to participate at all in academic classes. The only contact for most with regular high school students was in physical education, industrial arts, and during lunch. Assimilation was also hampered because many special students were bussed from other towns.

Student tutors are used.

To remedy the situation, the special education teachers proposed a joint venture with other faculty members and the Community Service Club of the school. The project recruited a tutoring staff of high school students to help out in the special education unit. The tutors proved to be a cross-section of the student body. Some were interested in human services, some in special education as a career, others in satisfying their own psychological and social needs; still others were simply looking for alternatives to study halls.

Meetings between student tutors and special education staff were devoted to learning the role of the special needs program, the goals and objectives of the tutoring program, and the expectations of the student tutors and the special needs students. The student tutors had needs just as varied as those they were to tutor, and few knew anything about special students at first hand.

Initially, student tutors came to the special classes to work one-to-one with students whose difficulties were in mathematics and reading. They reinforced skills in money counting, making change, telling time, addition, subtraction, multiplication, and division. Also, vocabulary was reviewed prior to reading lessons.

Social interaction is promoted.

The student tutors were enthusiastic, involved, and very dependable. They volunteered extra time. The tutors' academic assistance also permitted increased social interaction and understanding between themselves and special needs students. Friendships developed that led to further social interaction with other students.

An expanded tutoring program evolved from discussions among the industrial arts, home economics, physical education, and special needs teachers regarding difficulties special needs students had in integrated classes. The tutoring force was increased to include regular students in those classes who could provide help for the special students in need of one-to-one assistance with fundamental skills like balancing, holding a bat, bouncing a ball, or catching one. Several regular high school students also requested help with the same skills being developed in the integrated gym class. Student tutors then volunteered to plan, develop, and implement a developmental skills class for anyone having basic skill difficulties in gym classes.

Student tutors participate in assessment.

The student tutors, guided by the physical education department and special teachers, carefully assessed the needs of each student involved. Eight student tutors then carried out activities once a week to supplement regular gym programs. They planned units and developed four class sessions to stress each step involved in a skill needed for a designated sport or activity. Time was also given to skills needed in warm-up exercises, such as leg raises, sit-ups, side bends, and running in place. All skill areas supplemented activities in the regular classes.

The special needs students now interact with their own age group as well as faculty members throughout the high school setting. Mainstreaming, through peer tutoring, developed attitudes of acceptance and understanding by nonretarded students and by faculty members for persons with social and learning characteristics different from themselves. The program continues with new participants and expanded projects each year.

A City High School with a Functioning Program

Mrs. Hargrove is a teacher and department head in English at the W. A. Vines High School in Plano, Texas. Dr. Gotts is a faculty member at the University of Texas in Dallas. They were interviewed about successful secondary school strategies (Hawkins-Shepard, 1979). Adapted portions of the interview follow:

What are key considerations in mainstreaming retarded youngsters in high school?

Gotts: The problem comes with placement into traditional academic classes. It typically presumes a high degree of proficiency in written expression as well as higher level problem solving and critical thinking skills.

The curriculum requires adaption for many students.

Hargrove: We have resource classes for English, history, and math. There the resource teacher takes the objectives of the curriculum and adapts them for exceptional students.

Gotts: Individuals who have not attained the minimum competency to express themselves orally and in writing find it very difficult to progress in a regular curriculum that is subject matter oriented.

Hargrove: We have a number of regular education students who for one reason or another have not mastered some of the basic skills, so in fact there often is not as much adaptation needed as one might imagine.

Gotts: Lots of individuals who have not been identified as handicapped share many of the same problems. Because regular class teachers are dealing with that situation, it does become more realistic to integrate the exceptional youth who have similar needs.

What instructional adaptations are made for retarded students in regular classes?

Hargrove: I find it hard to talk in generalities—it is easier to think of specifics. Suppose a student is trying to write a paragraph. The objective could be to write a paragraph on the theme of a short story. Two-thirds of the class may be writing a paragraph on the theme of one particular story, and then a smaller group could be writing one on the theme of an easier story. The reading level might be lower, the thematic concept less complicated. Instructions can be more detailed; there may be more pattern given. Initial response could be a fill-in-the-blank type of exercise. Later students could do the same kind of response on their own, based upon the pattern taught. The objective remains the same, but the way the objective is carried out is different.

Gotts: Another successful strategy that we frequently use is the class paper. We give enough structure that almost anyone's answer is going to be correct. Students know exactly the kinds of things we are looking for, and everyone's response can be used. So we can, for example, build a class paper and move from that into a paper composed by a small group, and then to one composed by an individual. This is a successful way of accomplishing the same kinds of objectives that other students at other levels might be getting to in another way.

Group assignments build skills.

We have also used an interviewing technique. Students use a tape recorder to interview a friend or family member about some special experience. Sharing that gives a student the feeling of success.

Basically, this is what we do. For example, we assign three teachers (with three simultaneous meeting sections). They structure work on an individual or small group basis for students who need particular attention. Later, students can merge into the large group for a lecture or film. We're able to use a variety of strategies because we have the space and teachers to handle them.

Teaching strategies are varied.

How do you make traditional courses such as English and history relevant to the everyday needs that retarded individuals will have as adults in our society?

Hargrove: We do it two ways. *First,* we have special courses that are designed to meet needs of exceptional students as well as others. For example, there is a career English course that gives practical assistance in developing skills one needs to get and hold a job and to apply for credit.

Second, we make our regular curriculum suitable for almost everyone's needs. In English the basic thing we are concerned with is communication. We are striving for adequate communication skills, including speaking, writing, and listening. In literature courses, there is no problem in making everything we do relevant. Experiencing literature can help students broaden their experiences and establish their own values and philosophy of life. Basically, we try to give them life related skills.

Gotts: Traditionally, high schools have been oriented toward preparing people for entry into higher education. The kinds of changes that need to be made for the retarded are not much different from those needed for other students who are not headed toward a college career.

Flexible use of space encourages interaction.

In order to prevent special education from being identified as separate from the regular education programs, special education teachers have rotated classrooms and used the same location as regular education teachers. In some schools, regular education students are encouraged to drop by the special education classes before or after school. Such activities as listening to records, playing games, and joining into friendly conversation provide opportunities for furthering social relationships. At one school during football season last year, ratings were taken every morning on who within the local football league was projected to win the game and by how many points. Even some of the regular education teachers began to show up. The special education class became thought of as a positive place. After a while, some of the special education students who had tried to keep their status secret began openly inviting regular education peers.

Prevailing Versus Preferred Practices

The changes now sweeping across education have at their heart an altering perspective of the place of the regular class teacher in relation to the exceptional child and to special educators and support personnel. The double-column lists that follow indicate some of the changes that are taking place in programs for students who are considered retarded.

Developmental lags are identified.

Prevailing Practices	**Preferred Practices**
1. Children are assessed before or soon after they enter kindergarten or first grade to locate those who may have special educational needs.	1. Identification and assessment start long before school, often immediately after birth.
2. The needs assessment spots some pupils who show signs of "mental retardation," as the AAMD defines it.	2. The needs assessment spots some pupils who evidence developmental lags in understanding, learning power, and language (cognitive development).
3. The regular class teacher refers the pupils to the principal, who requests examination by a school psychologist.	3. The regular class teacher requests and receives within a few days consultation from a teacher specialist in the area of child learning problems, who assesses each case in cooperation with the regular teacher. Primary attention is given to the various domains of the school curriculum to see where and how the child might best be started on an instructional program.

Prevailing Practices	Preferred Practices
4. If permission is granted by the parents, the school psychologist schedules a visit to the school to examine the children as soon as possible.	4. The results of the assessments are reviewed by the teachers and the principal with the children's parents. With their participation a program plan is developed and, with the agreement of all, is put into effect. This initial plan is to be carried out while the child remains full time in the regular class.
5. The psychologist provides a written report of the results of the examination on each child. If a child meets the state's criteria so far as measured intelligence is concerned, transfer to a special program for mentally retarded pupils is recommended. If not, the psychologist includes in the report suggestions for use by the regular class teacher to correct the condition that prompted the referral.	5. The special educator brings whatever instructional materials the plan calls for into the regular class to augment what is already there. The child's level and rate of cognitive development are taken into account, but no label such as mental retardation is attached to the child. The two teachers decide together how best to share the work of implementing the individual plans. The special teacher schedules periods of time during the week to team with the regular class teacher in the regular class.
6. If the pupil qualifies for special education and if parental approval is given, transfer is made to a special class in the same school, a nearby school, or a separate school. The specialist teacher of mentally retarded pupils then designs an individual program for the child. That teacher has access to supervisors, counselors, speech clinicians, school social workers, the principal, and other specialists on call.	6. The regular and special teachers assess progress, and call on speech clinicians, other specialist teachers, supervisors, psychologists, counselors, school social workers, and the principal for additional consultation when they feel it is needed. In unusual cases, and with parental concurrence, a pupil may be assigned part time or full time to a separate group of children with similar instructional needs. When that provision is no longer needed, the child returns full time to the regular class.
7. The individual program may include provision for the child to spend some time in regular classes, if feasible. The most common arrangement is for atten-	7. The specialist teacher is available for consultation, planning, and diagnostic teaching to other regular class pupils whom the two teachers suspect are beginning to show evi-

Labels are not needed.

The concept of teamwork is a functional reality.

Need for special programming may disappear.

Prevailing Practices	Preferred Practices
dance in physical education, music, and, for older pupils, shop and home economics.	dence of lags in understanding, learning power, and language at any time during the school year. If it seems advisable for any of those children, the two teachers initiate actions that may lead to special education programming for them.
8. The objective for each child is to carry on a program of education featuring curriculum simplification, with learning geared to a slower pace and with content broken down into finer units. The pupil's achievement goals tend to be set in terms of a mental age expectancy projection. Continuation in the special class until graduation is anticipated, with work-study placement usual in the last year.	8. The objective for each child is to eliminate the educational lag that prompted the initial assessment. Then, when the child no longer needs a special education program, a teacher-pupil-parent conference is held and, with parental concurrence, special education programming is withdrawn. This may happen at any time the teachers find it is no longer needed, and that could be anywhere from the end of the first grade to the end of the twelfth grade.

A Comprehensive Individual Educational Design

The United States is embarked on a total life development thrust for its mentally retarded citizens. Because of its developmental character, that movement contains a major educational component and is being heavily staffed by educators.

The following eight points give a skeleton outline of a complete educational design for persons who show slow cognitive development:

These eight points supplement and expand on the preferred practices just noted.

1. The education of pupils characterized by slow cognitive growth should be carried on in the same school environment as the education of all other pupils. Specifically, that means starting to school and being in school in the same classes with all others.
2. The educational program for all children, slow in cognitive development or not, should be of high quality. Each child should have excellent educational opportunities matched to his needs, all day, every day.
3. Professionally qualified teachers should staff every teaching position in the school system. Every teacher, in addition to being fully certified for a specific teaching assignment, should have basic competencies in the education of exceptional children and youth.
4. All children with exceptional rates of cognitive growth ought to be recognized and well understood by responsible professional persons in the school

system. This calls for screening and identification prior to school entrance, plus a system for monitoring progress. The system used should serve only legitimate educational purposes and should avoid labeling and categorizing.

5. There should be a complement of special education teachers and aides who are assigned to supplement and support instruction for exceptional pupils, including any who show a low rate of cognitive development. The number of special teachers should bear a relationship to the number of such pupils identified in the school system, as determined by the regulations governing such matters in that state.

Insist on sufficient help.

6. Special educators (a) should consult, advise, team teach with regular class pupils, help evaluate pupils, and otherwise participate in the instruction of such pupils, as well as any others with whom the regular teacher requests assistance; and (b) should conduct individual or small group instruction for pupils with learning problems. That might be done apart from the rest of the class, if necessary, but usually should be at least in the same room.
7. The instructional program for cognitively slow pupils should extend from the preschool years, beginning not later than age 3 (at parental option), and continue through secondary and vocational school, with on-the-job training and placement being part of the sequence. As soon after birth as slow cognitive development is suspected, the parents, if they wish, should be furnished with guidance for stimulating the child's development at home.

Uninterrupted schooling, from early childhood to adulthood, is planned.

8. Regular class teachers, special educators, parents, and the child, where appropriate, should jointly plan and monitor all elements of the educational program. To do so effectively, of course, they need data and suggestions supplied by support personnel such as counselors, psychologists, and diagnosticians as well as participation and support from administrators and supervisors.

No doubt the above eight points could be extended and expanded. They certainly will be added to and enriched by what parents and educators bring to them in the years to come.

The teacher and the principal are standard bearers and prime movers in setting forth and implementing educational programs, whether general or specialized. Each is in more of a leadership position than has been the case in

To help prevent organic conditions from limiting cognitive growth, Madison, Wisconsin, begins special education for retarded children early, sometimes in the first month of life. Local hospitals report to the school system on children with handicaps detected at birth. A school representative contacts the family and often arranges for visits with other parents who have similar children. The school representative also schedules group parent meetings to illustrate ways to train infants at home. Parents have high praise for the "home start" activities.

the past. In particular, the child's teacher expresses views, exerts guidance, and is attended to as first among equals in partnership with parents, administrators, and supervisors.

The Role of the Regular Class Teacher, Special Teacher, and Principal

Regular class teachers increasingly assume important roles in teaching pupils whose cognitive development is significantly attenuated. That is true for teachers in settings ranging from preschool through high school, in vocational schools and lifelong learning centers, and for pupils of almost all degrees of cognitive development.

There are necessary preconditions if regular class teachers are to provide effective and efficient instruction for pupils with slowed cognitive development. They all involve teamwork in one or more forms.

The regular class teacher is involved at every step along the way.

1. Pupils whose cognitive development is seriously attenuated should be assigned to the regular teacher only with that teacher's prior knowledge.
2. The regular class teacher needs to be party to every program decision made about the pupils, including those considered to be retarded, for whom that teacher has any degree of responsibility.
3. Both regular teachers and specialists should have preservice or inservice professional preparation for mainstream instruction and for joint teaching and consulting.
4. It is essential to have "on call" a teacher trained in the educational implications of exceptional conditions, available to work with the regular teacher as needed. This includes team teaching, planning, and other instruction-related activities.
5. It should always be possible for the regular teacher and the specialist teacher to change programs and scheduling for the mentally retarded pupils who are full time or part time in regular classes.
6. The regular teacher needs ready access to whatever special instructional materials are called for in the pupil's program. This includes help from the instructional materials facility staff.
7. Planning and preparation time must be provided and coordinated between the special teacher and the regular teacher.
8. Authority, responsibility, and accountability should be worked out and mutually understood among the regular teachers, special teachers, parents, and principal before the mainstreaming is initiated.

Regular class teachers and school administrators are generally willing to try integration of pupils who are distinctly slow in cognitive development, either full or part time, as the individual instance may require (Zawadski, 1973). At the same time, there are some misgivings. Both regular teachers and administrators are apprehensive that they will not succeed and that both the retarded and the other pupils will receive less than their due. It is because of those important professional considerations that the eight preconditions just listed are viewed as essential. They should be implemented with thoughtful care and in a cooperative spirit by both teachers and administrators.

Summary

What Every School with Cognitively Slow Pupils Should Have

This list can be used to inventory the resources of a particular elementary, middle, or high school. The items included are basic. Unless a school has them, the odds are good that efforts to integrate retarded pupils will encounter serious problems. Conversely, when these resources are present the chances for success increase sharply.

The checklist cites basic resources.

Personnel

☐ Teacher-consultant specialist in the education of exceptional pupils, including those who demonstrate slowed cognitive development.
☐ Regular teaching and administrative personnel familiar with education for mentally retarded students and oriented to teamwork.
☐ Pupil personnel staff (counselor, nurse, psychologist, social worker) knowledgeable regarding needed special education and services, including those for retarded pupils.
☐ Physical education faculty, food service staff, and custodial staff attuned to special assignments they may have.
☐ Volunteers (aides, students, parents) to work with students on specific projects under teacher supervision.

Pupils

☐ All student body informed about individualized services and programs and prepared to interact constructively with schoolmates who may be retarded.

Facilities and Arrangements

☐ Records and work area for teacher-consultant specialist.
☐ Ready access to adaptive instructional materials.
☐ Space and facilities for aides and volunteers.
☐ Local authority, with principal's and parents' approval, to alter pupil programming within the school.

Continuing Education

☐ Minicourses monthly, mostly conducted by school faculty and staff for their colleagues, to update everyone on successful practices.
☐ General inservice at least twice yearly, using external consultants.

The Continuing Need for Teachers and Principals

Few school systems already have a fully staffed and comprehensive educational program for pupils with slowed cognitive development. Most have a partial program or are about to start building a program. The prospects for systematic growth are excellent.

Professional opportunities are multiple.

That state of affairs results in a substantial current and projected market for principals, for regular class teachers with competencies in work with pupils with slowed cognitive development, as well as for teachers who have made it a specialty. The market extends also to competent counselors, administrators, supervisors, psychologists, diagnosticians, and other members of the education professions, as well as to teacher aides and assistants. A bright part of that picture is the opportunity for teachers and others to shape new and emerging programs according to modern educational conceptions.

Parent groups and organizations of educators will continue to urge that all children, slow in development or otherwise, receive suitable opportunities for education. State and federal legislative enactments already mandate and support that position. Additional teachers will be needed to close the gap.

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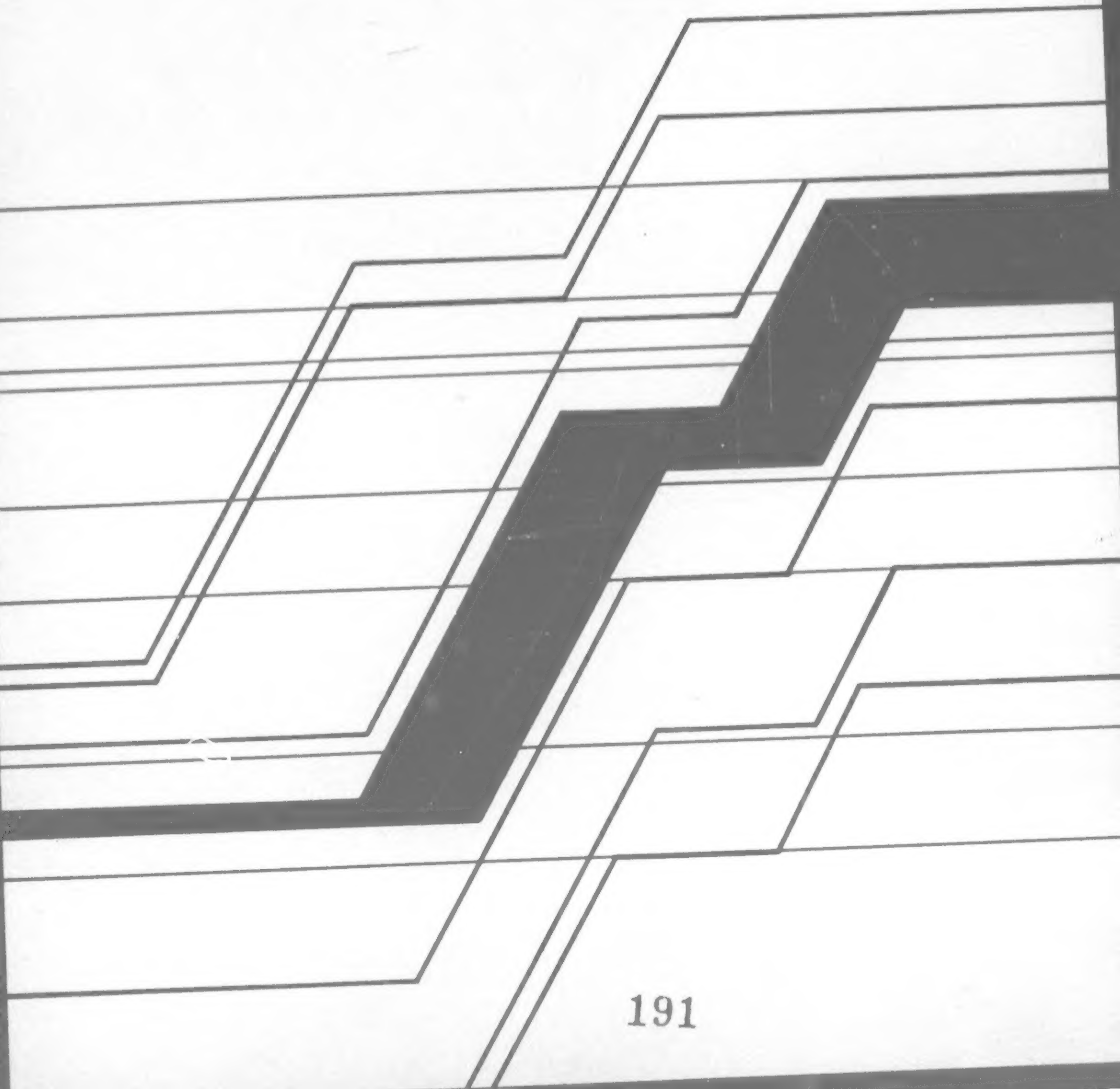

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The Challenge to Educators

What are gifted and talented children like? They certainly differ from one another and they certainly are not ordinary. In common with each other, they share very rapid rates of cognitive development; they learn quickly and retain learning well. Yet they hold more in common with the rest of their generation, their parents, and their teachers than might be expected.

This sketch of a spectacularly gifted and talented student lets us glimpse some facets of one such person. Also, it introduces, in side notes, the main themes that will later be developed more fully with respect to the special education of pupils with rapid cognitive development.

Harry Galanty[1]

☐Harry Galanty grew up in a small brick house in Atlanta, Georgia. He is a graduate of an integrated inner-city school. When this was written, Harry was a freshman at Harvard on a national scholarship.

Twin sisters of Harry's, Carole and Diane, are sophomores at Georgia State University. Their father is a postal clerk, a job he has had all the years Harry and his sisters were growing up. When Harry was nine and his sisters were 12, their mother died.

As Harry was growing up, no one at home urged him to learn or shaped and shared his academic life and goals. "A student such as Harry Galanty refutes the belief that all academically gifted students come from verbal, high socio-economic, academic-achieving backgrounds," says Margaret Bynum, education adviser for the Georgia Department of Education's Program for the Gifted.

Giftedness and talent are found in all elements of society.

"I didn't need home to learn," says Harry, "and I didn't need school to learn. I teach myself and I can do that anywhere. What I needed at school were the library for its books, the laboratories for my experiments, and the students and teachers for my social interaction."

By all measures, indices, and scales, Harry is a gifted student—a genius or near genius. "We define students as gifted if their cognitive powers when developed allow for innovation, evaluation, problem solving, leadership, and/or coping effectively in the complex realm in which they live," says Bynum.

"My greatest problem in the past was being considered one thing or another, a mathematician or a scientist or a genius," says Harry. "I hate the idea of being condemned to being one thing. I am seeking a balance now. In ninth and tenth grades, I was seeking to be a classical scientist; in eleventh grade, a mathematician; in twelfth grade, a poet; and now and in the years ahead, my goal is to be a simple human being.

Gifted and talented persons are not onesided.

"A simple human being has a balanced life, appreciates what others are doing, and accepts himself. No one is gifted at birth in becoming a simple human being. No one is born naturally happy with life. That is a real mountain to scale."

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[1] Adapted from Murphy, 1976.

"I've known Harry since he was a ninth grader and I was a tenth grader," says Duke University sophomore, Neil Williams. "We were working on our science projects together and had a common interest. But he branched out into other things like computers and poetry and intricate math projects."

Gifted and talented students need opportunities for independent study.

"No doubt Harry would have been an excellent student wherever he went to school, but Grady High has been a good place for him because he has been free to do research and to study on his own. He would have been like a robot in a school if he had been forced into a highly structured situation."

Randy Picklesimer, a freshman at Georgia Tech, has known Harry since they shared a ninth grade German class together. "I used to want to discuss far-out ideas, and no one would discuss them with me but Harry," says Randy.

"Harry used to feel that he was alone in his feelings. But now he is interested in literature, and it has given him a feeling that he is not alone, that he doesn't struggle by himself. After reading Ibsen, Strindberg, and T. S. Eliot, he is aware that others feel what he feels. He loves poetry. He is becoming aware of the universal nature of feelings."

Terman's five points still apply.

Lewis Terman, pioneer in studies on identifying, testing, and educating the gifted, suggested several conditions for their education: Gifted students should work at their own pace, be accelerated beyond their age group, work independently much of the time, develop persistence and creativity, meet and work with other gifted students, and have ample access to guidance in reaching major decisions.

Harry amassed some impressive honors and awards. His tenth grade science project, "Planetary Tidal Waves and Their Relation to Solar Flares," a computer-calculated project, was Grand Winner in the Atlanta Science Fair and first place winner in geophysics at the International Science and English Fair in San Diego.

"In my 35 years of teaching," says Grady mathematics teacher Martha Barnes, "I have never taught a student more able or more personable than Harry. He not only won first place in geophysics at the Fair, but he was, in my opinion, the best-liked student there."

During the summer between tenth and eleventh grades, Harry went to Ohio State University, where he was honored as one of the top 25 mathematics students in the nation by the Mathematics Association of America.

"The 'Olympiad' at Ohio State brought together the brightest of the bright," says Mrs. Barnes. "Students took a special test to earn this honor, and Harry made it on his own. All he ever needed a teacher for was enrichment. He taught himself trigonometry, analytical geometry, integral and differential calculus, and computer science. He never scored less than 800 on the advanced math section of the College Board exam, and although he never had a formal course in physics, Harry scored 780 on the College Board exam in physics in tenth grade and 800 on that exam in eleventh grade."

Strong, diverse interests are common.

"Analyzing the L Game" was Harry's eleventh grade science project, again an Atlanta first place winner and a first place award winner at the International Science Fair held at Notre Dame. . . .

Senior year brought additional awards and honors. Harry was elected co-president of the student body; achieved the top National Merit Score in Georgia; was STAR Student in the Atlanta school system; and was offered four full scholarships, accepting the one at Harvard.

Other significant achievements of Harry's high school career included attending the National Junior Achievement Conference at Indiana University for two years. One year Harry won third place for being an Outstanding Businessman. He also won a first place award for public speaking.

Inventiveness is a significant characteristic.

Deeply involved over the past two years with inventing his own words and concept families, a skill frequently associated with the academically gifted, Harry finds this new area of study his greatest challenge and the arena in which he may make his greatest contribution. . . . Harry is now writing "the poem of my youth" to personify his philosophy of *essentialism*. Titled *Water, Earth, and Sky*, the poem uses ten of Harry's new words, and he is interested to see if they will catch on. "The poem will make a big break with poetry," he says. "It will refer to itself, not other existing creations. It has its own mythology and will have very specific scientific passages."

"In terms of true learning, I plan to learn all my life," says Harry. "I know I could easily become a scientist and not much more. Maybe even a good one. But I have a different picture of myself in the future. One of my next dreams is to travel from place to place. I feel homeless in myself. I feel everywhere is my home. I am trying to find a new path."

Intellectual and personal growth must be balanced.

Not all the gifted in our nation who attempt to travel a new path will travel it with quite the depth, brilliance, and range of Harry Galanty. Yet their success, as his, depends on how much freedom they are given to find themselves and their way and how much confidence they can maintain along the way to become, as is Harry's goal, a simple human being. (Adapted from Murphy, 1976, pp. 29–30) ☐

Not all gifted and talented children find their own way and take good care of themselves. Some do survive inadequate schooling with their natural capabilities largely intact and, as adults, make enormous contributions to civilization's development and welfare. Perhaps three-fourths of potentially gifted and talented persons do not attain the educational levels of which they are capable (Jackson & Boston, 1976; Passow, 1979; Whitmore, 1980). Recently, a U.S. Commissioner of Education said:

Education must adapt to the great individual differences among gifted and talented pupils.

> Studies show that gifted children in our schools today are locked in by structural and administrative restrictions that inhibit their development. They are denied open access to advanced materials, a cruel kind of censorship of the mind. They are unsatisfied in their mature concern about ethical and moral questions as well as in their intellectual pursuits. (Marland, 1972, p. 19)

To illustrate this problem: A 9 year old gifted pupil, deeply interested in the comparative study of religions and their principles, did not have access to the high school library. It was miles away, was not open evenings or weekends, and there were no provisions for children or teachers to borrow from it. The youngster went to the public library in the company of a teenage sister, only to be told that the books she wanted were classified "adult" and she could not

Arbitrary rules can block development.

withdraw them. To use Marland's words, that pupil was "locked in by structural and administrative restrictions in the local school system and community and denied open access to advanced materials." She could not satisfy a legitimate, "mature concern about ethical and moral questions," an integral part of any intellectual study of religions.

In 1980, a 15 year old self-taught computer whiz was employed by the Election Board of a county in a Midwestern state to furnish faster, more accurate analyses of local election returns. A high school sophomore, he moved his equipment into the county court house and produced reports superior to any previous ones. He told officials, when asked, that his vocational-technical school wouldn't admit him to computer-related courses because he was not 16. "They don't want any little kids disturbing the class," he said.

Torrance (1973) told of an artistically talented Black child whose graphic accomplishments, under the warm encouragement of a teacher, far outstripped academic achievement. The youngster's extraordinary and botanically precise drawing of a flower was denied entry in a science contest. The reason: one of the school administrators did not believe that a pupil of limited academic attainments could produce such a picture without help.

There is no lack of information today about sound ways to assure optimum opportunities for gifted and talented children and youth. The central problem for teachers and principals is to dispel misunderstandings and to move what is known about the best ways to educate able pupils from the relative obscurity of textbooks and journals into action in the daily life of America's schools. That is the challenge.

Health and Social Welfare Considerations

Misconceptions must be erased.

Until recently, the chief interest in gifted and talented persons focused on their mental health. In the 17th century, Dryden wrote: "Great wits are sure to madness near allied, and thin partitions do their bounds divide." He bespoke the view of his day, which is traceable to early Greek misconceptions. Erroneous notions linked mental illness with precocity and creativity until the end of the 19th century. The attitude is summed up in this 1893 statement by a physician, Cesare Lombroso:

> The frequency of genius among lunatics and of madmen among men of genius explains the fact that the destiny of Nations has often been in the hands of the insane.... It seems as though nature had intended to ... preserve us from being dazzled by the brilliancy of those men of genius who might well have been compared, not to the planets which keep their appointed orbits, but to falling stars, lost and dispersed over the crust of the earth. (p. 361)

Gallagher (1975) called Lombroso's inaccurate conclusion an example of why even the most penetrating and intensive clinical case observations need to be evaluated against a solid background of objective research. Had Lombroso looked at the published work of a contemporary, Francis Galton (1869), it might have tempered his confidence. Galton's was the first recorded effort to study objectively the characteristics of a representative group of eminent persons. While they were not without defects, Galton found them to display a strength and integrity of character that outweighed any personality aberrations. Moreover, Lombroso might have found some fellow physicians in truly violent disagreement with him. Karl Kraus, a contemporary of Freud, said:

> Nerve doctors who ruin genius for us by calling it pathological should have their skulls bashed in by the genius' collected work. . . . One should grind one's heel into the faces of all rationalistic helpers of "normal humanity" who give reassurance to people unable to appreciate works of wit and fantasy. (Quoted in Janik & Toulmin, 1973)

The need for such passionate utterances diminished as the work begun in 1921 by Terman and his associates became better known. They showed that gifted and talented people enjoy, on the average, both better mental health and better physical health than the bulk of their contemporaries. That favored status was summarized in 1951 by Terman and Oden: "There is no law of compensation whereby the intellectual superiority of the gifted tends to be offset by inferiorities along non-intellectual lines" (p. 24).

In 1977 another followup study was done on the Terman group of 1,528 gifted persons identified in 1922 and 1928 when they were between ages 3 and 19 (Goleman, 1980). This great-grandparent of life span research reconfirms that highly able children can expect sounder than average lifelong physical and mental health.

The high promise of childhood tends to be fulfilled.

The 100 of Terman's men who, by 1977, were least successful both as to vocation and in reaching important and responsible positions demanding high intellectual ability were studied intensively. Even that 100, on the average, equaled or surpassed national means for job status and income.

Terman's sampling, done more than 60 years ago, did not include representative proportions of children by race, ethnicity, religion, and socioeconomic level. In selecting the population originally it leaned heavily on results from the individual intelligence tests then in existence. Thus caution is needed in applying the results to children from low socioeconomic backgrounds, to Black, Chinese, and American Indian children, and to children from Latin American, Italian, Portuguese, and Armenian ethnic groups.[2] For most other populations, however, the landmark study's findings provide sound information.

Gifted and talented children can be exceptional in other ways, too.

Teachers who instruct gifted and talented pupils need to be familiar, too, with special education for pupils with learning disabilities and behavior disorders, speech impairments, visual or hearing impairments, or other physical or health impairments. Many gifted and talented pupils' educational needs are complicated by the medical and psychological consequences of one or more of those conditions.

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[2] Baldwin's (1977) ten year followup study of 24 Black fourth graders vividly demonstrates the serious weakness in selecting all children for special education by arbitrary academic and intelligence test cutoff scores (see p. 90 of this book).

The presence of additional special needs may pose problems.

Gifted persons with other special educational needs sometimes face paradoxes in society. On the one hand, they are underestimated because "the extreme intellectual and special talents that they possess are often misled by society's sharp focuses on physical and social variation" (Mauser, 1975, p. 30). On the other hand, even when their intellectual prowess is recognized, architectural barriers and human prejudice can combine to keep them out of training or jobs at which they would be very successful, if allowed.

The world needs its best minds and talents. The high quality of life enjoyed by many nations has, as essential ingredients, the planning, guidance, inventions, and creations in the arts and sciences, the sense of humor, and the sound moral-ethical positions characteristic of their wisest and most creative citizens. In commerce, industry, agriculture, government, and all other sectors of the economy major problems need the continuing attention of the most capable and best educated specialists. The same is true for the personal side of our lives, in friendships and marriage, and in such institutions as church and school.

The future needs all the help it can get.

The emergence of new knowledge and technology at a pace that outstrips our ability to assimilate and use it effectively, the shift taking place in our society from a work-dominated to a leisure-dominated national style of life—these are but examples of large emerging social changes that spawn multitudes of problems. Such problems, of course, affect everyone, and everyone can contribute in some way to their solution. It is the gifted and talented, however, who are best able to produce the grand designs needed to attack such large scale issues in ways that promise success.

In order to direct some of the creative, problem solving energies of these potential leaders toward society's needs they must be educated in responsible attitudes toward their families, their communities, and their nation. They must be taught so they will grow in both social productivity and compassion toward others. Thus it is in society's interest that potentially gifted and talented children and youth be well educated both in content and in character, and that none of their capabilities be stunted, lost, or wasted because of weaknesses or omissions in their schooling.

Even more important than society's claims, under American democracy, are the rights and welfare of individual gifted and talented children. Self

"Piaget: *Education, for most people, means trying to lead the child to resemble the typical adult of his society. For me, education means making creators, even if there aren't many of them, even if the creations of one are limited by comparison with those of another. But you have to make inventors, innovators, not conformists.*

"Bringuier: *Do you think that every individual can be a creator?*

"Piaget: *In varying degrees, of course; there is always a field in which he can be one.*"

(Conversations with Jean Piaget, *by Jean-Claude Bringuier, University of Chicago Press, 1980.)*

actualization, healthy self concept, realistic self understanding, opportunity to develop one's potential—these are overriding educational rights implied for all children in federal and state constitutions and statutes. To make them explicit for gifted and talented pupils, however, is an important obligation that has yet to be responded to fully. Until that is done, not only is society the loser, but also the gifted and talented are denied full citizenship. Happily, there is much progress toward remedying past neglect of the education of gifted and talented children and youth.

"The free, exploring mind of the individual human is the most valuable thing in the world." John Steinbeck

Educational Considerations

Teachers are particularly aware of the large tasks they confront and of the limited resources society allocates in support of education. It should be encouraging, then, to find that in 1976 a federal policy on the education of the nation's gifted and talented youth was stated as follows:

> The United States Office of Education recognizes the need to assist states and school districts in providing quality education to meet the individual needs of all students. Commensurate with the overall purposes and objectives of education today, the U.S. Office of Education advocates educational services for those students who have demonstrated outstanding potential in a variety of fields.
>
> In 1971, the United States Commissioner of Education in a special report to the Congress of the United States cites as a pressing educational problem the lack of differentiated educational services for the nation's gifted and talented youth. This is particularly prevalent in the educational services available to minorities and other disadvantaged populations. In response to this need, in 1972 the United States Office of Education established an Office of Gifted and Talented.
>
> The primary responsibility for instructional programs and related activities in education rests with the states and localities. It is our belief that increased attention on the part of all concerned: states and local education agencies, community and professional organizations, educational institutions, decision makers at all levels, representatives of specialized fields of endeavor, such as the arts, will help to effect a significant advance in delivery of educational services to the gifted and talented.
>
> In view of these considerations, our policy is as follows:
>
> 1. The United States Office of Education recognizes the education of the gifted and talented as being an integral part of our educational system and supports the endeavors of all those who are involved in providing increased educational opportunities for these students.
> 2. The United States Office of Education is particularly interested in encouraging an investment by the private sector in a cooperative venture with the public sector for the purpose of providing needed specialized services to improve the quality and relevance of instruction for the gifted and talented student.
> 3. The United States Office of Education encourages states and school districts, wherever possible, within the administration of their programs, to consider actions which target upon the special needs of the gifted and talented population.

Federal policy addresses the educational needs of gifted students.

> 4. The United States Office of Education and its regional offices of education, in order to implement this policy, will provide technical and supportive services to state agencies, state and local institutions, and all individuals interested in gifted and talented education.
>
> This policy represents the position of the Department of Health, Education and Welfare, the United States Office of Education. (Trotter & Bell, 1976, p. 4)

Particularly noteworthy are the following points derived from the statement:

1. The term *gifted and talented* is given official sanction to describe this special needs group.
2. Gifted and talented pupils are defined as students who have demonstrated outstanding potential in a variety of fields.
3. Differentiation of educational services is the preferred procedure to supply the help needed by students who are gifted and talented.
4. Minorities and other disadvantaged populations are specifically included as population sectors to be served.
5. Cooperation and contributory investment are sought from nongovernment sources.
6. Primary responsibility for implementation lies with states and school systems, with the national role being technical assistance and support.

Differentiation of services is preferred.

Emerging Changes in Terminology

Teachers and principals who explore this topic encounter a profusion of terms. Expressions such as bright, high-IQ, superior, most able, genius, near-genius, highly intelligent, brilliant, mentally advanced, high achiever, major work, advanced placement, accelerate, creative, cognitive, divergent, eminent, and others vie for attention.

Excessive terminology is confusing.

To maximize both readability and rationality the terms *gifted* and *talented* are used here. The popular understanding of gifted and talented seems to put the term *gifted* more on the academic-intellectual side and *talented* more on the performing arts–creative side. Both views are encompassed in the expression *gifted and talented.* Moreover, extraordinary athletic and leadership qualities also are included.

Occasionally, synonyms are used; however, *gifted* and *talented* are the terms of choice. Our rationale for the expression rests on the position that cognition is the chief and central process that is implicated in differentiating gifted and talented persons from others (just as we considered cognition to play the same role in persons who are called mentally retarded). Influencing the rate and richness of cognitive development and motivating vigorous, creative, high-level behavior are what we view as the essential concerns of the educator.

Cognition is a central concept.

The components of cognition that most characterize persons who are gifted and talented are (a) heightened language achievement, and (b) ability to manipulate symbols, particularly to manipulate *systems* that are made up of symbols. Persons who are gifted and talented are extraordinarily capable of solving problems on an incipient basis, that is, through the manipulation of symbols, before the problems themselves are real or actual. They are especially apt at using the major *symbol systems* listed below.

- Oral words organized into a system called a language, like Russian or Chinese. (The symbols are sounds to which meanings are attached.)
- Written or printed words that represent the oral words. (The symbols are groups of visible marks to which meanings are attached.)
- Numbers, signs, and mathematical terms. (Like written or printed words, the symbols are visible marks with standard meanings. They can also be pronounced and understood in oral form. The symbols taken altogether constitute a specialized and systematic form of language that can be understood in common by persons who may use different oral language systems.)
- Musical notations, signs, and terms. (The symbolic structure and form has, in principle, the same characteristics as that of mathematics.)

Symbol systems are tools for thought.

These four symbol systems, namely oral language, printed language, mathematics, and music, are used by humans roughly in that order of frequency. Also, each one may be translated into each of the others. Additional important visual symbol systems that may be less generally known are employed in sculpture, painting, dance, theater in general, and mime in particular. These symbol systems, somewhat like everyday human body language, may be more idiosyncratic and less tightly structured than the first four noted above.

The ability to manipulate symbol systems helps one to link the seemingly separate notions of giftedness and talent. The manipulations are initially incipient before being transformed into oral expression, writing, body movement, or some combination of the three. Thus, the painter, the writer, the mathematician, the dancer, the inventor, the poet, or the composer "thinks it through" or "thinks it out" albeit perhaps covertly, or even without immediate personal awareness, as an essential early step leading to creation or production. The artist "possesses it internally" prior to displaying it to the world.

Use of symbol systems links the separate notions of giftedness and talent.

Intelligence is, of course, more than simply the manipulation of symbols and symbol systems to some end. Intelligent behavior by an individual has to be understood as an expression of some level of cognitive development under conditions of awareness of intent and direction, of logical deduction and consistency, and it must be worthwhile in the view of the group affected (Wechsler, 1975). In our view, persons who are gifted and talented possess, to an unusually high degree, what intelligence tests *hope* to measure: "the capacity of an individual to understand the world about him and his resourcefulness to cope with its challenges" (Wechsler, 1975, p. 139).

Our concern, however, is not the assessment of capacity as an end in itself. Rather, it is to help teachers and principals know where to begin work on the enhancement of cognitive development and motivation for learning and performing at high levels, which is the major motive for any assessment. And that enhancement process, in our view, has common elements that cut across all gifts and talents. Gallagher (1975) said, "The ability to manipulate internally learned symbol systems is perhaps the *sine qua non* of giftedness" (pp. 10–11). We take that to apply across the board to what we call giftedness and talent.

Technology and Special Procedures

A variety of educational options is offered.

An applied science of the education of those who are gifted and talented is emerging, along with the technical terminology to describe it. Key parts of that growing body of specialized knowledge are procedures called advanced placement, early admission, curriculum compression, work-study, out-of-level texts and assignments, supervised (guided, independent) research, acceleration (individual or group), mentor arrangements, curriculum content extension, and curriculum process emphasis. Some children profit from all of these during the same school year (Sellin & Birch, 1980, 1981).

Gifted and talented pupils should work their way swiftly through the basic curriculum, plus. They should do so at a faster rate than others and their comprehension at any given stage should be deeper and more substantial. That applies whether the pupils come from minority cultures or from the dominant societal group. But that will not happen unless the technical and special procedures listed above are correctly and consistently applied.

Within the regular curriculum, plus, each highly able student's work should be individualized. A key characteristic of individualization is flexibility. Certainly there should be a fairly constant format for each personalized plan of education. But there should also be some openness and maneuvering room.

Curriculum Individualization: Content

As to curriculum content, or subject matter, four principles apply from kindergarten through the rest of school for gifted and talented children and youth.

Content consists mainly of information and concepts.

First, teachers and principals should be sure that all gifted and talented pupils acquire the basic skills and content of the standard curriculum, and that they do so thoroughly. This means checking to see that there are no real gaps, no serious slippage resulting from the speed and informality with which much of the learning has taken place. Instruction should carefully fill in the holes, while speed and informality are fostered and rewarded.

Second, students should be encouraged to move ahead in the standard curriculum (reading, motor development, writing, sciences, mathematics, oral languages, music, art, literature) as rapidly as fits each pupil's individual pace. Advanced books, materials, and instruction should be readily available in a systematic and orderly way, and the child's efforts in curriculum acceleration should be reinforced.

Break common curricular boundries.

Third, the scope of curricular offerings should be extended in nonconventional, broadening ways. For example, typing, shorthand, bookkeeping, and various technical and specialized vocational shops and laboratories ought to be added at times when gifted and talented students can schedule them, or used to replace academic courses passed by examination. Thorough and detailed data on curriculum content are, of course, beyond the scope of this book. Such information is certainly necessary, though, for intelligent planning for children who are unusually apt. Helpful guidance can be found, for example, in the work of Meeker (1969), Renzulli and Smith (1978), Sellin and Birch (1980, 1981), and Whitmore (1980).

Use personal/family interests as guides.

Fourth, teachers and counselors should help each child to follow personal inclinations to reach outside the usual age-appropriate curriculum. Teachers can use informal independent study or a more formal advanced placement program. In such cases, however, parents must be involved in planning, and teachers must have their cooperation. Thus, if a 10, 12, or 16 year old wishes to pursue content areas like astronomy, animal husbandry, ethics, epistemology, morality, Moslem cultures, paper making, or population control, it is more than ordinarily important and desirable that there be understanding and cooperation between home and school. Such prearrangement is helpful in giving parents a voice in what is going on as well as ensuring that their values concerning the relevance and the propriety of particular studies are respected.

Curriculum Individualization: Process

Process is mainly how one accomplishes tasks and deals with others.

Curricula also include processes, which consist of ways of behaving about learning, whatever the content or subject might be. Six curriculum process principles, significant for all pupils, have particular bearing on the education of gifted and talented children and youth. According to these principles, teachers should:

1. Teach pupils to be efficient and effective at independent study, instilling and polishing the skills called for in self-directed learning and in analyzing and solving problems on one's own.
2. Help pupils to invoke and apply complex cognitive processes such as creative thinking, critiques, and pro and con analyses.
3. Encourage pupils to press discussions of questions or issues all the way to the culminating activity of decision making and to the clear communication to others of plans, status reports, or solutions based on these decisions.
4. Establish the human interaction skills necessary to work smoothly with groups of all ages and of all levels of cognitive development.
5. Aid pupils in acquiring respect for all other humans, whatever their gifts or talents, and in understanding themselves in relation to all others.
6. Build in pupils positive expectations about careers and adult living that serve to optimize their talents and gifts.

Curriculum individualization is a significant component of the aptitude treatment interaction model of instruction. Curriculum should be personalized to match the unique aptitude factors of each pupil

Curriculum compression, also called *telescoping content,* means deliberately helping children to cover, perhaps in 1 or 2 years or a shorter time, what would ordinarily take 2 to 5 years. An example is Seth, who, in a little more than 1 calendar year, mastered 4½ years of mathematics equivalent to Algebra II and III, Plane Geometry, Trigonometry, and Analytic Geometry (Sellin & Birch, 1980; Stanley, 1976).

Instruction can be personalized.

Work-study is a combination of career development and academic learning tailored to an individual. A discussion of the executive internship program later in this chapter illustrates it.

Out-of-level work refers to supplementing texts or assignments ordinarily used at that grade level. Gifted and talented students often can profitably use primary sources and college level texts in art or chemistry or history to study the same content as their elementary or secondary classmates. Out-of-level testing is helpful, too, either teacher-made or standardized. A fourth grade girl who reads eighth grade materials easily will not, for example, be adequately measured by a fourth grade standardized test.

These and other special procedures referred to above will be identified and illustrated in examples used later in the chapter.

The Person Who Is Gifted and Talented

Manifestations of giftedness and talent have been acclaimed for centuries. They include leadership in government, exploration, navigation, prowess in arms, feats of athletics, literary achievement, acting, musical composition and performance, scientific discovery, invention, and other worthy kinds of behavior. Persons displaying these qualities to an outstanding degree rank among the world's most honored citizens.

Persistent Misconceptions

Yet a persistent untruth about gifted and talented adults is that they were indifferent scholars as children. Perhaps some were, but the general rule holds that the potential for adult greatness shows itself in the early years. Evidence of that among outstanding painters is found in the Picasso Museum in Barcelona, Spain. An unusually complete record of Pablo Picasso's work as a child and teenager vividly shows the extraordinary mastery of techniques plus early evidence of creative imagination that the whole world came to admire during his mature years.

Distinguished adults were extraordinary as children.

Wherever objective data are available for impartial examination, the popular but unwarranted notion that outstanding leaders were poor achievers as youngsters is refuted. The story that Winston Churchill was a poor student as a boy may long have comforted some British schoolboys, but it was thoroughly debunked in 1975. Churchill attended Stoke Brunswick, a junior school, from 1884 to 1888. John Bartlett, the headmaster, found old records that showed the young Winston to have been quite bright. Bartlett said:

> It gave Sir Winston some amusement to pretend in his later life that he had always been bottom of his class, but it was certainly not true. Our contemporary records show he worked hard and that he had very real ability. In his last year he was top in every subject except geography, in which he came in second. (*International Herald Tribune,* 1975)

The single talent concept is another common fallacy. Actually the vast majority of gifted and talented persons are well rounded, though their public images are sometimes lopsided because only their major interests are presented to the world.

Leonardo da Vinci's life, for example, refutes the single talent concept: his breadth of interest and activity was recorded and widely acknowledged. Varied capabilities in the same gifted and talented person are the rule, not the unusual case.

Breadth is characteristic.

Another artist who exemplifies multitalent, Diego Rodriguez DeSilva y Velazquez (1599–1660), was studying painting by the time he was 10 years old and began a formal apprenticeship at age 12. By the age of 18 he was a known painter in Seville. By 24 he was a widely heralded artist, and he remained creative and productive until his death at age 61. A little noted fact, important here, is that Velazquez was also one of the most able and effective administrators in the Spanish Court, being Grand Chamberlain of the Palace of Philip IV, with major management responsibilities that cut across all state matters and even foreign affairs.

The richness of Thomas Jefferson's gifts and talents are familiar to many Americans. Architect, writer, politician, government administrator, philosopher—this array of achievements speaks again to the breadth that can be expected from such exceptional persons.

The eminent Swiss psychologist, Jean Piaget, was interested in natural history before psychology. In 1907 at the age of 10 he had an article published in a journal of natural history. It dealt with an unusual albino sparrow. A few years later his writings about mollusks excited the attention of the director of the Geneva Museum of Natural History. There was a vacancy on the museum's staff. Inquiries were initiated to determine if this very able young scientific writer might be interested in the post of curator of the mollusk collection. Imagine the museum director's surprise when it was discovered that the curatorship was being considered for a schoolboy then 14 years of age!

Fortunately for psychology, a few years later Piaget became an assistant to Theodore Simon in the Binet Laboratory in Paris. His interests moved toward psychology, particularly learning and language development. His developmental concepts of intelligence made him a giant in the science of psychology.

Another mistaken idea that has been hard to lay to rest is that gifted and talented persons, if not actually mentally ill, do tend to be odd. Certainly mental illness does occur throughout society, and there are eccentrics in every sector of life. But both longitudinal studies and cross-sectional studies demonstrate that gifted and talented persons are generally more stable in their emotional lives than the population as a whole.

Teachers and principals can correct misunderstandings.

Why are such false notions so widely held and so difficult to refute with success? Only speculation can be offered in answer to that question. Perhaps the general population is uncomfortable at the thought of a group of persons who are generally superior in physique, mentality, and emotional and social stability and adaptability. It might be easier to live with the concept that a high capability is usually balanced by a deficiency in another capability, even though the concept is a false one.

The Terman reports and others (Goleman, 1980; Sellin & Birch, 1980, 1981) provide strong hints for how to increase the probability that gifted and talented potential will be put to good use. They recommend home and school atmospheres that:

- *encourage fun-linked learning such as making collections, raising and training animals, and participatory games;*
- *provide interesting books and magazines, music lessons, chances to learn other languages;*
- *tolerate a degree of rebellion, with affection; and*
- *reward perseverance, prudence, and desire to excel.*

High achievers, in recalling their childhoods, say they felt and were encouraged by parental pressure and support to forge ahead in school and to attend college.

Knowledge helps dispel prejudice.

Teachers need to know about these fallacious beliefs and how to combat them. In many situations, such ideas need to be confronted with facts in order to allow educational programs for gifted children and youth to develop. Lack of accurate knowledge about the nature and prospects of gifted pupils is a common deterrant to instructional program development for them. And that lack of knowledge on the part of the general public, gifted persons themselves, board of education members, and some educators, too, can be further clouded by prejudices of the kinds described.

Gifted and talented children, given appropriate education, guidance, and stimulation, tend to build socially constructive, full, productive, and personally satisfying adult lives. With a sound educational foundation, many become eminent, that is, distinguished and noteworthy in the most positive sense. Some of them attain greatness among their contemporaries and may, under auspicious conditions, join the very select ranks of genius.

Degrees of Giftedness and Talent

Genius is a status earned by a very few.

There are differences in the degree to which gifted and talented young people turn out to be productive and influential. The person who produces what society values highly is almost certain to be considered eminent in comparison with others. Those among the eminent whose productions are also most influential in solving society's problems and in setting new directions for cultural and scientific and social movement will tend later to be identified as geniuses. Thus, giftedness and talent are evidenced in what an individual does and in what reactions that product causes in others. A well reasoned, modern view of the meaning of *genius* is:

> anyone who . . . produces, over a long period of time, a large body of work that has a significant influence on many persons for many years; requiring these people, as well as the individual in question, to come to terms with a different set

> of attitudes, ideas, viewpoints, or techniques before all can have "peace of mind," that is, a sense of resolution and closure.
>
> The work associated with this person must be presented to others, for their use and evaluation; it is a public work and takes other talented men and women years to understand, to implement, and equally important, to surpass. It is others' *necessary* effort that makes up the basic thrust of this person's impact. Others often spend their own careers working out the implications of this work, for in the end they must come to terms with it. It is this aspect that is so important, whether it is wanted by others or predictable.
>
> Acknowledgement usually occurs through the work being referred to often and being explicitly incorporated in others' work. The individual most responsible for the work receives institutional awards, for example, the Nobel Prize, and lastly, ... becomes the object of archival interest, first within a profession and ... eventually among a wider, interested lay public (evidenced in popular and "serious" biographies).
>
> The key ingredient to genius is productivity—large in volume, extraordinary in longevity, more or less unpredictable in content. The impact of the work is dislocation or sudden reorganization constituting a major shift, that is, productions of "originality" rather than of reasonable extension. (Albert, 1975, pp. 140–141)

Degrees of giftedness vary.

Giftedness and talent is not an all-or-none matter. There are degrees of mental acceleration much like there are degrees of mental retardation. They can be ascertained in a general way early in life, but only through consistent application of high quality education is it really possible to find how near an above-average child will come, as an adult, to genius. And it is not necessary to reach the genius status to achieve a fulfilling and socially valuable life.

Children recognized by teachers and parents are gifted and talented, and for whom personalized education is designed, are on the first step toward optimum self fulfillment. It is not possible to know which of them, if any, will come to be regarded as geniuses by future generations. It is possible, though, to provide a good educational start for all of them. Whitmore (1980) asserted that "chronic underachievement by gifted students can be prevented by the provision of appropriate educational programs, and early patterns of underachievement can be reversed." She went on to state:

> Educational programs for achieving and underachieving gifted students are one and the same; the only difference ... is in the amount of teacher time and effort directed toward such objectives as enhancing self-esteem, developing social skills, and remediating academic deficiencies. (p. 197)

As used in education, the terms *gifted* and *talented* are future oriented. Teachers and principals work to improve student achievement. But usually not until the teens or twenties will students display solid evidence of gifts and talents that attract contemporary adult world attention and recognition. There are exceptions. Sometimes in dance, theatre, swimming, music, acrobatics, and figure skating, extraordinary concentration, motor skill, sensitivity, stamina, purposefulness, and grace combine with fine teaching to allow earlier world-acclaimed performance.

Apart from such exceptions, however, teachers of gifted and talented pupils are working with *youngsters who act as if they will become* leaders of their generations. Special education for those pupils is designed to enhance that potential—in short, to help the predicted future of each such pupil become a reality.

Education is future oriented.

There have been serious efforts to study the linkage of the aptitudes and achievements shown by preschool and school age children with their later productivity. There is more than enough evidence that psychoeducational assessment by trained school psychologists, teachers, and parents can locate the great majority of potentially gifted and talented children in the general population of children as early as 3 years of age, and with even greater precision by ages 5 to 7. It is in these years, then, that special learning characteristics of gifted and talented pupils begin to assume importance for educators. Any effort to locate gifted and talented children in the early years or later should take the various components of giftedness and talent into account. Identification must use multiple methods. "No child shall be denied entry into a program or project on the basis of only one method of identification" (*U.S. Federal Register*, May 6, 1976, Sec. 160B.3biii).

Defining Giftedness and Talent Relevantly

Only recently have efforts to identify giftedness and talent turned a spotlight on definitions relevant for teaching and learning (Reynolds & Birch, 1977, pp. 210–233). Definitions framed in the context of educational implications are proving both useful and appropriate.

Definitions are linked to curriculum.

> A conceptual shift from concern for a broadened definition of the gifted child to a concern for a broadened assessment of each child would seem to be a necessary and desirable one ... The intent should be to provide necessary service, not to award membership into a group called "gifted" ... By using an educational or diagnostic approach, attention is focused on the educational needs of the individual child, and this is a legitimate activity for the gifted child, as it is for all children. (Gear & Vare, n.d., pp. 15–16)

Since the Marland (1972) report and the passage of Public Law 95–561 (Title IX, Part A), there is broadened acceptance of a definition of giftedness and talent that calls for

> ... possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic, or leadership ability, or in the performing and visual arts.

The language of the 1972 Marland definition also includes "productive thinking ... and psychomotor ability."

Attention is called to the tendency for these definitions to link closely to the present curricular and extracurricular (or co-curricular) components of today's schools. That makes it feasible to build programs for individual gifted and talented pupils from existing educational resources.

The "demonstrated or potential abilities" referred to are psychological in nature. They include first the *ability to learn,* that is to take in abstract concepts, factual information, and bodily movements, to cause them to interact with each other, and to use the results of the interaction in practical or theoretical ways. The "abilities" also include *ability to think* that is, to comprehend, to organize, to retain, to transfer, and to use information in problem solving. These processes, taken together, are often called *cognition.* The ability to learn and the ability to think, both possessed in very high degree, characterize an independent, critical analyst and leader.

It is our wish, though, to add to the above definitional concepts a consideration of other personality and societal variables. Renzulli (1978), for instance, says that giftedness and talent stem from three trait clusters: above-average general abilities, task commitment, and creativity. Sellin and Birch (1980, 1981) argue for giving weight to Renzulli's view, noting that task commitment (evident and persistent motivation; zeal) is highly important. They also consider that there are social need influences (Newland, 1976) that strongly condition how much extrinsic reward attaches to high attainment in particular fields. Whitmore (1980) says in this connection, "History has shown the gifted to be sociopolitical pawns."

Adapt definitions to actual local conditions.

Present-day definitions move away from earlier efforts to make them universal—one definition applicable in all the nation's schools. Instead, it is urged that each school system develop its own operational definition, so long as it is within the range of relatively broad guidelines.

Minority group membership, too, impinges on identification and program planning. Valuable insight regarding this variable is emerging from such studies as that of Reyna and Bernal (1976) which "approached the study of giftedness as perceived by the Mexican Americans themselves." They wanted to "discover the group's values, definition of talent, and productive goals" (p. 9). An exploratory study, it nonetheless suggested that localized operational definitions have a significant part to play in mediating between state guidelines and the day to day activities of teachers and principals.

Interlock programs and definitions.

Most important, the beginning of program planning itself is encouraged concomitant with or even prior to the establishment of local definitions, so the two can interact. The hoped-for result is a close fit between the special education programs a school mounts and the nature of the gifted and talented children to be served by these programs.

Inservice training ought not be separated from the character of the specialized programs to be offered or from the determination of which pupils take part. Thus we see the current trend to link all components of program development rather than to try to deal separately with the definition problem, as has been the case up to now. This fits well within the aptitude treatment interaction formulation we consider fruitful for instruction.

A key point: there is a constant danger of letting the tools used to locate the children become synonymous with the definition of giftedness and talent. To prevent that error, teachers and principals must hold fast to the position that they study and interpret what data the tools provide rather than take the data

Don't confuse the test score and the child.

at face value and use them in connection with hard and fast cutoff points. The final word as to whether a pupil is to be provided with a special education program should be had by the parents, responsible teachers, and other professional educators. The decision should be based on their objective and subjective appraisal of the pupil, the nature of the special program contemplated, the atmosphere in which the pupil lives and goes to school, and the interactions among them. *That calls for judgment that makes use of test results and other data, rather than allowing the decision to be made by arbitrary, preset scores or grade averages.*

The way children learn best gives clues to how they might best be taught. Compare the columns below regarding gifted and talented pupils.

Pupil Learning Characteristics	**Derived Teaching Principles**
1. Learning can move at a faster rate than in other pupils.	1. Accelerate the pace at which all elements of the curriculum move.
2. Learning can attain more complex levels than in other pupils.	2. Deliberately introduce and teach important abstract concepts and ideas in the skills and disciplines earlier than usual.
3. Self directed learning can begin and can be habituated earlier.	3. Expand opportunities for independent study, discovery, and synthesis, rather than let the gifted pupil be a passive receiver of teacher presented material.

Potential can be sensitively encouraged by teachers.

The derived principles may provide clues enough for many teachers. For elaboration, a rich variety of examples can be found in Gallagher (1975), Sellin and Birch (1980, 1981), and Whitmore (1980) for all subjects and ages. Special added attention is needed by pupils whose school performance is consistently poorer than their out-of-school attainments and whose inventive and leadership qualities show in other ways in or out of school. The same is true for children whose family and cultural backgrounds are markedly different and whose potential gifts and talents may not immediately be evident in the dominant culture. Not all gifted and talented children and youth find it easy to be self-starters. That is particularly true of the handicapped gifted.

The teacher who invents the means to implement the three principles listed above in ways that appeal simultaneously to underachievers, to minority and culturally different pupils, to the handicapped gifted, and to the more easily identified gifted and talented achievers from the dominant culture has found treasures of teaching techniques that deserve to be shared with others.

Edward turned to me slowly, deliberately, and replied, "17,446,762" to my question, "What is 4,723 multiplied by 8,694?" He spoke clearly and with almost mechanical exactness. His blank eyes never met mine. After speaking, the good-looking 9 year old returned to staring outward at nothing.

Milly, a fluttering, simpering young teenager, held contact with none of her surroundings except her older sister's hand, and that only at the sister's initiative, to keep the active child from dashing and whirling about the room. I spoke: "Can you tell me, Milly, whether, in 1998, any months will have Thursdays that fall on the 8th?" Without change in expression or activity the unhesitating answer came, "Two: January and October."

These two children, called by some idiot savants, *display some mental abilities higher by far than ordinary persons, but have general intellectual levels that are very low (though not as low as in the usual idiot group). Others speak of the world's Edwards and Millys as* autistic savants. *With an incidence of about 1 in 2,000 births, the challenging eccentricities of these youngsters illustrate the yet unsolved mysteries at the edges of our knowledge about giftedness and talent. (Hill, 1978; Rimland, 1978)*

Prevailing Versus Preferred Practices

The weak administrative and program practices usually found in many schools are contrasted here with the preferred practices found operating successfully in schools whose programs are showing the way to others. The latter are not in the majority, but their numbers are growing.

Prevailing Practices	Preferred Practices
1. Identification is sporadic, usually delayed until grade 3, 4, or later. Identification is based on group intelligence test scores, grade averages, standardized achievement test scores, teacher recommendations, or a combination of those, but most attention is paid to arbitrary cutoff scores.	1. Systematic identification and assessment of preschool age children is available to permit possible early admission to kindergarten or first grade. Deliberate efforts are made to locate children of high promise from kindergarten on, with special attention to searching in minority group and disadvantaged populations. Use of individual intelligence tests, creativity tests, social development tests, behavioral checklists, parental nominations, and teacher nominations, characterize the identification process.

Early assessment provides a head start.

	Prevailing Practices	**Preferred Practices**
	2. Prior to educational program decisions about children there is little systematic educational assessment and planning.	2. Individualized educational needs assessments are made for each identified child (largely done as part of the identification process) prior to educational program decisions. The needs assessment findings guide the program decisions which, themselves, are individualized.
Coordination should be systematically applied.	3. Program coordination, either in the local school or throughout the whole school system, is absent or haphazard.	3. A school system staff person is responsible for the overall program coordination for gifted and talented pupils.
	4. Special attention to a gifted or talented pupil comes only when a regular class teacher takes an interest.	4. Individualized programming is available from preschool years through secondary schools, including liaison with higher education institutions. Continuous progress is monitored by regular class and specialist teachers from kindergarten through twelfth grade.
	5. Parents may know that their children are in special programs, but they have little to say about the program or its content.	5. There is full involvement of parents and the child in decision making about the educational planning and evaluation of individualized programs.
Progress is rountinely evaluated for all identified pupils.	6. Age-grade acceleration is arranged for a few pupils through early admission to school, double promotion, or early college placement.	6. Each identified pupil's progress is reviewed at least annually to consider possible age-grade acceleration and program redesign.
	7. When program adaptations are arranged it is with minimal participation by specialists in education of the gifted.	7. The regular class teacher uses fellow teachers who have specialized in the education of the gifted when arranging program adaptations for pupils.
	8. Special art, music, creative writing, or other classes for elementary or secondary age students are occasionally offered, either during school hours or on Saturdays.	8. There is flexible, personalized scheduling across and up and down regular classes and grade levels to accommodate special abilities and interests and to take advantage of the many special competencies possessed by particular regular class teachers. There is open access, under rea-

Prevailing Practices	**Preferred Practices**	
	sonable supervision, to libraries and laboratories so pupils can pursue individual projects.	
9. A few communities and states maintain special secondary schools, either for high achievers in general or designated for the sciences or the performing arts, for instance. Some are for the summer only. Other school districts run "pull-out" programs for selected students for one or two periods or one or two days per week.	9. Emphasis is kept on bringing special educational facilities, staff, and activities to gifted and talented children in the context of the regular class rather than moving the child to a special school or class.	*Activities within the regular class are encouraged.*
10. Advanced placement college courses are available in less than one out of six high schools.	10. Advanced placement is available and pupils are encouraged, with professional guidance, to explore the various options it affords.	
11. There are few teachers who have specialized in the education of gifted and talented pupils.	11. There is a staff of teachers who have specialized in the education of gifted and talented pupils, approximately 1 to each 500 pupils in the total elementary and secondary school enrollment; this staff consults and team teaches with regular class teachers. Each specialist teacher has two aides who can be assigned to work with teachers or pupils or do other work as the regular class and specialist teacher determine.	*Specialists provide consultation.*
12. There is little or no preservice or inservice preparation for regular class teachers to work with gifted or talented pupils.	12. Periodic inservice minicourses are offered for regular class teachers to maintain and update understandings and skills about individualizing programs for these and other children and youth. In these minicourses, teachers often teach each other. Successful course completion is counted toward professional and salary advancement.	*Inservice education is emphasized.*

Philip II, ruler of Macedonia, subjugated most Greek city-states, unified them without destroying personal freedoms, and became the most powerful European king of the fourth century, B.C. He set the stage for his son, Alexander the Great, to change the map of the world. What is less widely known is the atmosphere and instruction Philip arranged for his growing son. Through paternal encouragement the boy was in frequent contact with gifted artists, writers, and actors, and Aristotle was summoned from Athens to tutor Alexander at the Macedonian court.

Illustrations of Effective School Programs

If a thorough history is ever prepared on this topic it may unearth some amazing information. As it is, we must settle for anecdotes and incidental material culled from histories prepared for other purposes (Cox, 1926; Goertzel & Goertzel, 1962; Sumption & Luecking, 1960).

Early Beginnings

Plato recommended that Greeks of outstanding ability be educated from childhood for responsible governmental positions. To detect future leaders, he suggested that promising juveniles be observed while being made to perform actions in which they were most likely to be deceived. Those who remembered and were not deceived were to be selected and those who failed in the trial were to be rejected.

The early history of gifted and talented education in other cultures needs study.

The Emperor Charlemagne, according to legend, urged the education at state expense of promising children among the common people.

Comenius' 17th century writings frequently referred to students with extraordinary aptitude for learning. He advocated financial aid for bright students from poor homes.

The rapid rise of the Ottoman Empire in the 1500's has been credited in large part to Suleiman the Magnificent's three-step special education process. He sent teams to find the fairest, strongest, and brightest youth in the empire, regardless of their social class or of whether they were Christian, Moslem, or adherents to other faiths. It was made worth their while to accept tutelage under his protection in the Moslem religion, in the learned disciplines of that day, and in martial arts. A robe of honor was given to each boy for exceptional work in attaining strength and knowledge. Finally, successful graduates were offered posts of honor and responsibility in the armed forces, in the arts and sciences, and in government.

The Chinese emperors sponsored instruction and a system of civil service examinations. These brought into government employ not only able clerks, managers, and generals, but also poets, artists, and other creative persons.

The tales of other civilizations may well contain similar themes. The full story of the development of leadership in the Aztec and Inca civilizations, for instance, has yet to be told. Equally unstated are the approaches to giftedness and talent on the part of the nations of the African continent, the American Indians, and the Japanese.

Recent History

From the colonization of America on, there were scattered attempts to understand and plan special education for precocious children. Beginning in the 1920's several programs took fairly firm shape (French, 1959). In 1955 Pressey put in capsule form the tenets of an educational program aimed at fostering the capabilities of gifted and talented youth. He titled the topic, "Toward More and Better American Geniuses," and said:

> A practicing genius is produced by giving a precocious able youngster early encouragement, intensive instruction, continuing opportunity as he advances, a congruent stimulating social life, and cumulative success experiences. (p.14)

Concerning curriculum adaptations, Pressey stated: "In proportion as [these youngsters] are very able and especially as they have special talents, special adaptations of the usual curriculums are likely to be desirable" (p. 16). With respect to acceleration, he added:

Pressey's early views are valid today.

> Admission to the first grade on the basis of readiness for school rather than chronological age, replacement of the first three grades by a "primary pool" out of which children would move early or late depending on when they finish primary work, rapid-progress sections doing three years work in two in junior and senior high school, and credit by examination in college—should permit each youngster to move through educational programs at his own pace, without being conspicuous if his rate is not that of the average. (pp. 123–129)

That recipe, offered 35 years ago, was reconfirmed in 1980; early identification, encouragement, special instruction, sequential successes, curriculum adaptation, and personally paced progress are still grounded solidly in the research of today (Stephens, 1979). A few school systems, too, applied Pressey's plan, at least parts of it. There were scattered efforts in the United States and elsewhere before and during the 1950's to promote school adaptations for gifted and talented pupils. Some took root and flourished.

The special arrangements varied. Examples include special secondary schools such as those in New York City and Cincinnati; more or less separate clusters of special classes such as those known as Major Work Classes in Cleveland, and the classes in University City, Missouri; and early admission to kindergarten and first grade like that pioneered in Brookline, Massachusetts, and in several counties and towns in Nebraska.

Some rejected special education for the gifted and talented.

These and other real life settings helped materially in keeping alive the interest in special education for the nation's most able pupils. They furnished operational evidence that many of the needed adaptations could work. However, the impact of that evidence was blunted against the stonewall tactics of those who did not welcome the idea of special education for gifted and talented children and youth.

Martinson (1973) identified reasons why many educators rejected efforts to extend special education to this group.

> Two major ones were (1) concern about the establishment of a meritocracy and (2) the fear of snobbery within an elite group. Others include (3) fear of pressures on children and (4) the deprivation of gifted and average children of contact with one another. (p. 221).

Further, Martinson pointed out that the notion on the part of some educational leaders that special groupings are undemocratic prompted articles in professional journals promoting that view. Economy moves, too, found existing special classes easy targets in time of competing pressures.

National and international pressures mounted.

Despite difficulties, however, more programs slowly appeared. States employed coordinators within state education departments to give overall encouragement and leadership. The Association for the Gifted (TAG), a division of The Council for Exceptional Children, promoted national and regional meetings, often cooperating with other interested groups, both national and state. The Ford Foundation, the Carnegie Corporation, and other foundations gave modest but meaningful support to the preparation of program development leaders. The Russian launching of Sputnik sparked U.S. Congressional interest in improvements in American secondary school education, especially in mathematics and the sciences. That Congressional interest materialized in the form of the National Defense Education Act, a platform from which added support for programs of education for the gifted and talented took sustenance.

So, despite a lukewarm-to-cool level of interest from most educators, education designed for the nation's gifted held onto most of its limited beachheads and made some small gains during the recent past. It was not until the present, though, that a substantial spurt of activity began.

Current Status

Parent activism was a stimulus.

Vigorous activism by parents in recent years led to legislation and court determinations that propelled special education sharply ahead, at the same time setting it on a course into the mainstream of the nation's education. Though initiated for children and youth with mental retardation, the impact has generalized to all the exceptional, including gifted and talented young people. By 1980 all states except Arkansas, Massachusetts, Minnesota, New Hampshire, and Wisconsin reported programs. Arkansas and Massachusetts reported that legislation was under consideration. All but five states had named persons to be responsible for gifted and talented education.

Examples of the consequences of legislative and judicial actions are found in these statements about gifted and talented education in a growing number of states.

1. Special education is increasingly required by state law for all school age gifted and talented children and youth.

2. It is the responsibility of each local school district, primarily, to see that the special education is forthcoming.[3]
3. The state provides earmarked funds, over and above usual state educational support to local districts, to help pay for required special education.
4. Professional certification is increasingly a requirement for specialists.

Local school systems are now beginning, most for the first time, to think in long-range terms about program designs for their gifted and talented pupils. It is still true that most schools in America have not yet applied any plan that promises to produce comprehensive educational opportunities for this group. Yet, interest in making overall plans is stirring.

Age-Grade and Curriculum Acceleration

Acceleration is one well researched and readily available adaptation of conventional schooling for gifted and talented pupils (Keating, 1976; Reynolds, Birch, & Tuseth, 1962). There is, however, something about age or content acceleration for bright children that disturbs many people. For one thing, they are reluctant to believe that it is healthy—either for the pupils or the rest of society. Followup studies show a number of positive results and no significant negative effects (Sellin & Birch, 1981). It would be well in that connection to listen to what mentally advanced pupils who experience acceleration have to say about it.

All forms of accelerations proved effective.

Early Entry in College Hailed as Blessing by U.S. Prodigies[4]

by Gene I. Maeroff

□BALTIMORE, Nov. 9—"I like going to college," said Eric, a chunky 13-year-old who two years ago was a sixth grader in a New York public school. "In elementary school, the teachers didn't know how to handle a kid like me. I was looked on as a bother by many of them."

Eric, who declined to give his last name or identify his New York college, "because I'm bothered enough by people who think I'm an oddity," joined 15 other youngsters on a panel of mathematical prodigies held last week at Johns Hopkins University.

It was part of an annual symposium on early childhood education and a highly unusual event because such youngsters ordinarily shy away from publicity and academic officials strive to protect their youngsters' privacy.

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[3] On March 26, 1979, the Commonwealth Court of Pennsylvania ruled that, where special education for the gifted is mandated, local school districts may not refuse to establish programs for financial reasons.

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Thus, for many of the 300 researchers, teachers and others in the audience, it was a rare opportunity to get a personal perspective on the joys and frustrations of giftedness.

Tell of Exasperation

Seated behind a row of tables stretching the width of the auditorium stage, the youngsters told of the exasperation at being trapped in an elementary school or junior high ill-equipped to cope with genius and described their relief at finding a high school or college program in which to accelerate their studies.

"In the first grade," said Eric, who has now covered the equivalent of five semesters of college mathematics, "my teacher saw I was uninterested in the mathematics we were doing so she gave me second and third-grade workbooks but I was still uninterested."

"If I hadn't entered college after the sixth grade," he continued, "I might have become frustrated in all my subjects. Teachers would rather have normal students they know how to take care of."

Terri Hill, who has chosen to remain enrolled in her high school in Columbia, Md., while doing extra, college-level work in mathematics, said that she thought part of the problem for the teachers was the fear of being proved wrong by gifted students.

Fear Factor Cited

"A student wants to get something from a teacher," said the slim, soft-spoken 16-year-old, who throws the discus on the girl's track team. "A teacher can't sit back and be afraid of being corrected by a student if the student is right."

"I didn't feel at all out of place in skipping four grades and going to college," said Joseph Bates, 20, a doctoral candidate in computer science at Cornell University. "I made friends easily. I didn't date much but I wasn't ready for it. Now, I have more time for dating."

Gifted students are impelled toward college level work, in part, by their impatience with some of the public school tasks they consider mundane and boring. (Maeroff, 1975) ☐

Some acceleration seems essential in elementary school.

Decisions about acceleration come into focus early in elementary school. Martinson's (1972) report highlighted the difficulties teachers face if they stick to typical age-grade linked curricula, even with "horizontal enrichment." In recounting the characteristics of 1,000 gifted pupils she noted that:

> In the kindergarten group, the average performance of gifted students was comparable to that of second grade students.... The average for fourth and fifth grade gifted children was beyond that of seventh grade students. The average for gifted eighth grade students was equal or beyond the typical performance of twelfth grade students. (p. 81)

The following statement by Marland (1976) summarizes the Advanced Placement Program, a major national form of secondary school acceleration.

Advanced Placement

by Sidney P. Marland, Jr., President
College Entrance Examination Board,
New York City

☐ Some 20 years ago, my predecessors at the College Board established the Advanced Placement Program (AP), which allows able high school students to study college-level courses while still in school and offers them possible advanced placement in colleges on the basis of their AP examinations.

AP provides schools with curriculum descriptions, in a variety of disciplines—American history, art, biology, chemistry, classics, English, European history, French, German, Latin, mathematics, music, physics, and Spanish. Talented and conscientious school and college teachers from each field prepare these course descriptions, descriptions that can readily be adapted to local initiatives. The course outlines and tests are revised biennially to keep current with college offerings.

College credit by examination is increasing.

For several reasons, secondary schools should seriously consider introducing the program if they have not already done so.

First, the lockstep traditional system of education is being abandoned in many schools to suit the styles and needs of individual students. AP has been in the forefront of this trend, giving able students an opportunity to stretch their minds. Every indication persuades us that more and more of our ablest students now seek this kind of intellectual challenge.

Second, the solemn progression from grade 12 to 13, long a glacial monument to the great silence between schools and colleges, is beginning to thaw as schools define multiple paths to the high school diploma and as colleges exercise flexibility in their admissions policies. Yet the abyss between school and college faculties in the curriculum area remains deep.

AP does not provide a full solution, but each year it does offer a systematic and influential meeting ground for school and college teachers, when the AP readers from both secondary schools and colleges gather to review and grade the examinations and share a full week of hard work, illuminating exchanges, and camaraderie.

Third, college credit earned by examination in myriad forms and styles is increasingly in the air. While college faculties express concern that some of these programs may result in a cheapening of academic degrees, they do not seem to view AP in this context. Perhaps this is because college faculties have always played a major role in developing the AP program.

Fourth, in the years ahead, the decline in the school-age population, already evident in the elementary grades, will move into high school and into college, where there may well be sharp declines in enrollments. This will no doubt stimulate competition among colleges for able students who have not yet received their high school diploma. Some collegiate institutions already enroll eleventh graders. More programs of this type will come.

But secondary schools can stand their ground and preserve their eleventh and twelfth grade programs in this sharpening competition if they can do the job for able students in these grades as effectively as the colleges can. AP is one proven way to do this.

Advanced placement costs little.

Many schools around the country have demonstrated that AP can be installed for a modest or even negligible incremental cost.

Beginning an AP program in a school, even for only one or two subjects, can create a dynamic concern for academic excellence that permeates the entire school and exerts a positive influence on other classes and courses as well as on members of the faculty.

Experienced AP users have found the program to be an effective instrument for serving gifted but socially disadvantaged students. I found this particularly true in my years with the Pittsburgh schools, and I suspect the same would be true in other inner-city schools where pride in the program often helps urban school leaders change negative stereotypes held by some parents and segments of the public. (Adapted from pp. 43–44) ☐

Acceleration discussions always bring up questions about social adjustment and social maturity. Some additional insight on that matter is provided by Gallagher (1975). He reported a study of his own that examined the social standing among schoolmates of children with high intelligence test scores. He stated, "There is little or no question about the general social status of high-IQ elementary school children. It is high" (p. 39). He then summarized other findings related to the social positions of such children, as follows:

> 1. The social status of gifted children seems to show a relative decrease at the secondary level.
> 2. Gifted children are able to identify correctly the social status of others and themselves better than the average.
> 3. Gifted children tend to choose each other for friends when they are removed from the classroom for a period of time each day.
> 4. Gifted children lose some general social acceptance when removed from the classroom for a special workshop.
> 5. Acceleration at the elementary level does not seriously affect their social adjustment.
> 6. Gifted children seem to serve as an ego-ideal to the average child, who chooses him [sic] even though he sees differences between himself and the gifted youngster. (pp. 39–40)

These summaries argue for moving confidently with age-grade acceleration in the elementary years.

Generalize with caution.

Caution is advisable, of course. The generalizations hold well for gifted and talented children who are already superior performers in school and who are solidly adjusted in the dominant culture's milieu. How they apply to other children is not so certain. Special education programs must build on the individual characteristics of pupils and match with local school and community culture and resources.

Total School System Involvement

There is an active search by school systems for models to use for guidance. It makes sense to learn from experiences elsewhere. That is one reason for illustrative programs. We recommend, though, that teachers and other educators build from the ground up in their own localities, using state guidelines plus principles and suggestions extracted from examples.

An illustration of building solidly on local resources while using expert consultation is found in the Westside Community Schools of Omaha, Nebraska as reported in an article by Morton (1975). Note especially the school system-wide approach and the inclusion of all interested children and adults.

☐"We do not want our gifted children exploited—nor isolated from their regular classmates. We DO want enrichment and imaginative development. The answer does NOT lie in providing a greater quantity of the same type of work assigned to others. We want them to be challenged to explore and develop their abilities and potentials." These were the comments of parents whose gifted and talented children are enrolled in the Westside Community Schools, District 66, in Omaha.

"There are many types of giftedness."

"There are many types of giftedness, not all of them of the intellectual and academic type. We know that current I.Q. tests measure only 1/12 of the multiple talents now classified. We need inspiration and new ideas in working with talented and gifted students. Such students need not be isolated, but they would benefit from occasional closer association with peers of equal intelligence, and with similar interests." These were the comments of administrators and teachers.

The task before the Westside Community Schools was great. Concentrated work with community, parents, board members, administrators, teachers, and students had resulted in outlining eighteen goals of the system of nearly 10,000

> *"Articles . . . directed toward teachers of exceptional children often include the exhortation 'Develop the child's strengths as well as ameliorate his weaknesses!' . . . What often happens, however, is that the valleys are so low and the weaknesses so noticeable that we find ourselves spending so much time on remediation that there is very little time left for developing the potential gifts and talents.*
>
> *"Emphasis on the development of talents can accomplish several desirable goals. First, a child can develop talents into career interests or satisfying hobbies. Second, self concepts can be greatly improved through the child's own perception . . . as well as through peer perception of his or her activities. Third, deficit areas can often be improved by working through areas of strength." (Maker, 1979, p. 120)*

pupils. Twelve elementary feeder schools of three junior highs were divided into consortia, with each consortium developing and concentrating on disciplines to be shared throughout the district in meeting specific aspects of major goals—cognitive, affective, and psycho-motor, K through 12. The concept [was] commitment to individualization.

A Talented and Gifted (TAG) parent organization had been formed and had asked for visible results. Creative teachers had been placed in each of the consortium schools to work with TAG students. A modest budget was set aside for TAG student resources. Two TAG consultants were hired to function in the three consortia.

Identification and program planning interact.

Previously the intellectually gifted had been identified by licensed psychologists. Now a new philosophy was called for—one which did not isolate or exploit those identified. A district-wide identification of talented students, as well as those intellectually gifted in grades K through 6, was begun.

An orientation session of this philosophy was given separately to principals. Faculty meetings were then held with teachers. They were asked to administer group activity tests as suggested by Kough, De Haan, and Havighurst for talented and academically gifted, and to indicate those scoring highest on a referral blank. The top 10 to 15 percent of the high scores in intellectual academic achievement, creative writing, art, music, physical education, dancing, dramatics, or social leadership were then referred to a licensed psychologist for further testing.

Consultants and teachers meet with each principal following the identification phase, and outline a program to meet the needs indicated. Teachers then select a particular area of talent, and students with related abilities meet with this teacher during one or more periods each week. In most of the twelve elementary schools, mini-courses are designed to develop latent talents. TAG consultants were asked to examine the curriculum itself to determine where creative instruction could be introduced. Resources and ideas are constantly being added and improved. Teachers are sent ideas of creativity each week by the TAG consultants voluntarily, and special requests are handled as expediently as is possible.

Approaches included expanded conventional plus out-of-conventional curricular work.

At the Swanson Library, resources were provided which were not available in our own schools. From a lengthy list, the following areas of research were selected: astronomy, Indian culture, vanishing wildlife, archaeology, agronomy, origin of crafts, electronics, careers, psychology, geology and mineralogy, history of sports and Olympics, nuclear physics, economics, and underwater exploration.

An Arbor Heights Junior High mini-computer course was designed for students of accelerated math at the elementary level. A creative stitchery sewing class has engaged the interest of creative students. Dramatics is under the supervision of a man long experienced in Children's Theatre. His expertise is also available to elementary students and he is scheduled to conduct in-service for teachers. Mini-courses have been added in cardboard carpentry, vocational trades, photography, creative writing, typing skills, and crafts as needs have been perceived. The local educational TV station is following the activities of primary students who have displayed leadership potential. Their study of local government of a period of several weeks will result in the formulating of their own curriculum guide. An elementary group representing eight talents has been developed as a television company, and works weekly with the high school TV production group.

Transportation requirements for these classes are met through consulting the district bus manager. He was able to schedule the necessary 216 trips to the library and museum this past school year. Volunteer parents accompany the buses, and many provide supplemental transportation in private cars.

A consistent effort has been made to provide TAG students with as many opportunities as possible, utilizing available facilities without additional cost. Over nine thousand opportunities have been provided for our elementary students this year. Plans are being made to expand programs already prevalent at the secondary level. No child is excluded if he has a specific interest in any of the programs offered.

Parents, teachers, and principals have given us positive support. Teachers say: "We're implementing the ideas; keep them coming." Principals respond: "We're pleased to be given a new direction, the help for our teachers, and the stimulation for students." Parents say, "We think it's great!"

Parents, teachers, principals gave positive support.

I often think of the kindergarten boy who came along on a trip to the Swanson Library. He was concerned because he could not write a report of what he had learned for his friends. He was assured that it was enough to remember to talk about what he had seen. Later we learned that he not only drew chalk pictures of the earth and planets for his kindergarten room, but also gave the first grade class a half-hour lecture with chalkboard illustrations!

It's rewarding to hear enthusiastic discussions of programs at the Joslyn Museum. "We got to touch all those old articles from the pioneers," was the awed remark of primary youngsters. In one classroom a pioneer breakfast with pioneer food and costumes was a followup of this interest area.

A nine week study of a cultural exchange of foreign students from the University of Nebraska at Omaha has been set up. Ninety-six students from thirty or more foreign countries visit through the district's twelve elementary schools, talking and exchanging their cultures with the talented, gifted *and interested* students of District 66, Omaha, Nebraska.

The advisory board and a committee of principals and teachers met with the TAG Consultants to go over the hundreds of students', teachers', parents', and administrators' evaluations. Together they helped to set up the general course of action and suggested new interest areas, and resources to utilize in the following year's program.

Students benefit from a closer relationship with the community.

As the over-all TAG program continues, we find that we have only begun to tap our community resources. More parents in professions and skilled trades and crafts are volunteering their time to assist; and our appreciation of community resource people and their generous help is growing steadily. All students benefit from this closer relationship. (Adapted from pp. 25–26)☐

High School–Community Linkages

Another prototype with particular applicability for secondary pupils is a nationwide program (Executive High School Internships of America, New York City, New York). It forges impressive ties between schools and society's other organizations. It has particular implications for career education, as described in the following quote.

Career education receives a boost.

Executive High School Internships A Boon for the Gifted and Talented[5]

☐ Almost 2,500 gifted and talented juniors and seniors from 26 school districts in 17 states are learning about organizational leadership from the top—as Executive High School Interns to business executives and managers, government commissioners and administrators, newspaper editors, television producers and directors, hospital administrators, judges and attorneys, and directors of social service agencies and civic associations.

For a full semester, on sabbatical from regular classes, they are immersed in the world of organizations and administration, learning how decisions are made and earning a full range of academic credit in the process.

A Utopian Experience

"It's like utopia," says Vicki Cook (Hillsborough County, Florida), who has spent her Executive Internship semester with the president of Ensslin Advertising in Tampa. The week finds her variously meeting with clients, presenting storyboards, editing TV commercials (including those in which she has appeared), and spending time in areas such as accounting and production.

"It's like utopia..."

Another Hillsborough intern, Karl Miller, is equally delighted with the experience. "Since I've joined the program, I feel like one of the best informed citizens in Hillsborough," he reports.

Karl's placement with the executive director of the Hillsborough County Planning Commission involves law and city planning, areas he hopes to combine in a future career. His internship responsibilities include attending public hearings of the commission and updating research and analytical information on economic development in the county.

Both placements were arranged by coordinator JoAnn Hunter of the Hillsborough County Public Schools.

One offshoot of the Hillsborough model is in the Orange County Public Schools. Coordinator Doris Prather learned that Joe Finger, an Oak Ridge High School senior who ranks second in his class, was interested in a career in broadcasting, so she found him the perfect spot, with WKIS Radio in

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[5] Adopted from Hirsch, 1976.

Orlando, where he has written commercials and news stories and even broadcast sports reports. "The program has given me an opportunity to gain some exposure to the business world," he adds.

"I have a natural interest in making money," grins Kevin Hanks (Pinellas County, Florida) in explaining his selection of an Executive Internship with the president of Raymond, James & Associates, where he has developed expertise in the stock market and in the management of a brokerage house with 12 offices throughout Florida.

His placement has brought Kevin into contact with other brokers, analysts, and "a multimillionaire oilman." A research report on nonferrous metals which he prepared was used in an analyst's speech.

Kevin, who is pursuing an accounting course through independent study, reports that he has offered his father some advice on investments. "I gave him a tip that wasn't so hot," he adds with a shrug.

Problem Solving Curriculum

Besides the excitement of their placements, which extend from Monday through Thursday during the entire business day, the interns also attend Friday seminars on management, administration, and decision making. Adapted from the Harvard Business School case study approach, the curriculum emphasizes a problem solving focus in which interns learn to function, management consultant fashion, as analysts of organizational problems.

Seminars emphasize problem analysis.

After the first few weeks of reading prepared cases, the interns take over and begin to develop their own. "I was hesitant at first about presenting a case study to the Palm Beach group," recalls Patrick Healy. "However, the other interns quickly got caught up in it."

Role of the Coordinator

The coordinators orchestrate sponsor and student interviews, decide which students will be seen by what sponsors, and arrange final placements based on mutual preferences. Students keep extensive records of their experiences through daily logs, which are reviewed by the coordinators.

A National Base

[Coordinators are prepared] through a week-long National Coordinators Training Academy sponsored by the parent organization, Executive High School Internships of America. Located in New York City, the national office provides training and ongoing technical assistance to participating districts, along with program materials, coordinators' bulletins, newsletters, and intern insurance. An annual National Staff Training Institute brings together all the Executive Internships coordinators from around the country, and the National Conference of Executive High School Interns attracts student delegates from each of the districts to Washington, D.C., for a week.

Coordinators receive training.

The national office works with school systems that agree to fund a full time coordinator position for the program; release students full time for participation, without having to attend classes or keep up with schoolwork; provide optional independent study opportunities, and award a full semester of academic credit for participation. (Adapted from pp. 22–23) □

Comprehensive models are needed now.

Most school districts now supply only pieces of models rather than complete ones. None of the illustrations just described, from acceleration through internships, is, by itself, sufficient.[6]

Thus, the present status is characterized by two features. One is active and rapid growth of the governmental, parental, and professional support structures that must form the essential framework of any educational program if it is to have stability. That building goes on at national, state, and local levels simultaneously. The second feature is educational program development in local schools, with almost everyone looking elsewhere for operating examples of programs they might adapt or emulate.

Current Trends

Almost everyone recognizes that children who show gifts and talents constitute one of the nation's most important natural resources. Yet only recently has serious consideration been paid to conserving and nurturing that resource. The informed public recognizes the major roles teachers and principals have to play if these pupils are to attain what they should, and teachers and principals are pressing for thoroughness rather than piecemeal programming.

Characteristics of an Appropriate Educational Program

A well developed educational scheme for gifted and talented pupils is:

Here are six keys to program adequacy.

1. *Comprehensive,* covering preschool through higher education;
2. *Continuous,* being available for the pupil's entire school career;
3. *Balanced,* including equal opportunity to work in all curricular and extracurricular areas;
4. *Participatory,* involving regular and special teachers, pupils, parents, and community resources in both decision making and instruction;
5. *Flexible,* being adaptable to changes in school and pupil conditions; and
6. *Individualized,* encouraging instruction based on close matches between pupil characteristics and what is taught and how it is taught. (Sellin & Birch, 1980, p. 4)

Teachers, according to future projections, will have more and more opportunities for professional leadership and influential guidance on developments in the schools. Existing programs will be shaped and sharpened further by their contributions.

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[6] The only detailed description of a comprehensive model for an entire school system of which we know is the Yourtowne archetype elaborated in Sellin and Birch (1980, 1981).

The Role of the Regular Class Teacher, Special Teacher, and Principal

It is not new for regular teachers and principals to have all-day-long responsibilities for gifted and talented pupils. What is new is that:

1. Particular attention is now called to these pupils.
2. Individualized education programs are required for them.[7]
3. There are specialized staff plus particularized instructional procedures to buttress the regular class teacher's work.
4. Parental involvement is increased.

These can contribute to a positive thrust if principals and regular class teachers receive preparatory training and are allowed sufficient time to capitalize on their added resources, and if specialists are available.

Teamwork with Specialists

In the past, regular teachers had responsibility only for interactions with their pupils. That responsibility now extends to the coordination of the activities of a resource teacher and other pupils with the gifted and talented pupils in the class.

The regular teacher should be the central actor and coordinator.

The regular teacher's role includes the joint preparation of individualized education programs with the specialist teacher. The children for whom the plans are prepared, and their parents, will properly be party to the planning. Because the regular teacher will lead that team effort, management skills are called for, too.

It may be helpful to envision the regular teacher and pupils, including those who are gifted and talented, in the center of focus, with various services and consultants surrounding them. These services (e.g., library, guidance counseling, instructional materials center) and consultants (specialist teacher, teacher aide, volunteers) come to the regular teacher, if requested. What they do is intended for gifted pupils, but it may well splash over in beneficial ways, either planned or incidentally, for other pupils. The regular teacher exercises professional generalship on behalf of the whole class while making sure that each gifted and talented pupil is accommodated by whatever forms of acceleration and enrichment are most suitable.

Good programs for gifted and talented pupils help everyone.

Gifted and talented pupils, for the most part, learn the standard curricular skills and content quickly and easily. They often move far beyond the conventional curricular offerings into advanced areas. Therefore, they need teaching that does not tether them to a limited range. One excellent means to extend education in that way is through a mentor who provides what Sellin and

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[7] Some states require formal IEP's, as for other exceptional children. Even if not required by law or regulation, individualized planning is certainly a professional responsibility and a necessary ingredient in high quality teaching.

Birch (1981) have called "a helping relationship between a mature person of competence and a younger person" (p. 106). Almost every community has adults who would be pleased to be helpful if teachers and principals would invite their cooperation in specific instances.

Inquiry is encouraged.

Highly able pupils gain most from instruction that is not preoccupied with piling up information, even advanced information. The regular class, for them, needs to be a forum for research, inquiry, and projects alive with real products and applications. That is true from kindergarten through high school and postsecondary education.

These pupils, when encouraged, are quick to evaluate feelings and hard evidence and to make well reasoned choices. They learn readily to produce imaginative, unusual, yet soundly grounded ideas, and to employ them in problem solution. They are persistently curious. They need principal and teacher support to maintain confidence in their own good ideas when those ideas differ from the norm or the vogue, and the confidence to live with the consequences of their independence.

Such characteristics, when they appear in regular classes, challenge the breadth and depth of professionalism in any teacher. It is no small quality to be able to direct work in widely divergent areas, to help pupils test their work's relevance, and to guide inquiry, either personally or by putting students in effective contact with others in the school or community who can help.

Commonalities with all pupils are recognized.

Aware that gifted and talented pupils are not a species apart, principals and teachers see them on a continuum with all other pupils. The chief dimension of the continuum, in an abstract sense, is cognitive development. Yet realistically, gifted and talented pupils have their ups and downs on all sorts of educationally significant qualities. They intermingle with all others in more ways than they differ. This can be well illustrated through examining the "Talent Totem Poles" in Figure 6–1. Taylor (1968) indicated that there are many qualities that need attention as personalized education is planned for children and youth.

A central tone of the mainstream theme is that adults are more likely to work effectively together if they have practice in doing so as children and youth. Thus a premium is placed on the principal's and teacher's skill in helping pupils of all ages to work together, to achieve satisfying socialization without sacrificing their independence and creativity. To do that it is necessary to establish an environment in which some students can pursue highly advanced topics, often beyond the reach not only of most other pupils but also

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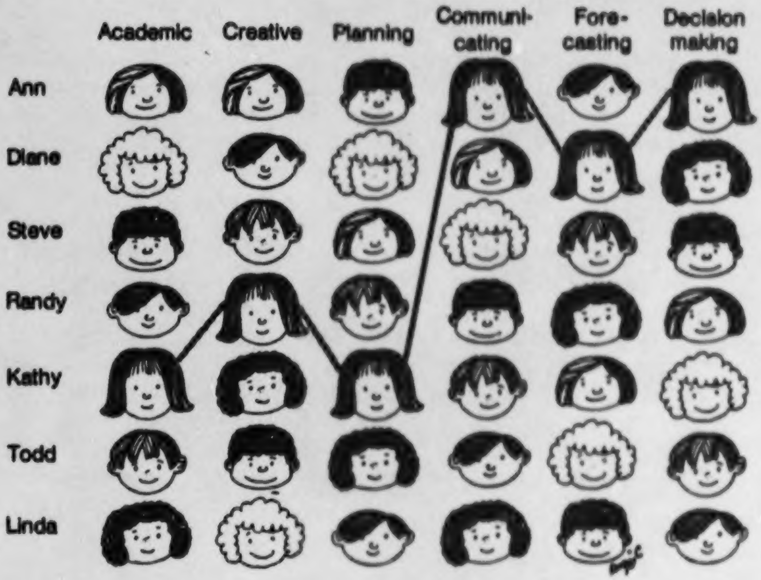
A mentor *is an older person of competence who voluntarily instructs a student in areas of mutual interest. The term's origin traces to Mentor, protector and adviser to Ulysses' young son. During the 20 year period of the Trojan War, the faithful guardian Mentor tutored the son and helped him toward manhood. Mentor's valuable service is memorialized in today's term that conveys the sense of continuing, friendly, and helpful guidance.*

FIGURE 6–1
Taylor's Talent Totem Poles



Source: C. W. Taylor, Be talent developers as well as knowledge dispensers. *Today's Education*, 1968, *57*, 67–69. Reprinted with permission.

outside the competence of their teachers. Purkey (1978) calls that an "invitational" environment and Whitmore (1980) speaks of it as "facilitative." Sellin and Birch (1980) use the term *generative* in much the same way and offer many examples. They all mean a place where pupils know they are valued and that is arranged to help them do their work. For gifted and talented pupils, then, their teacher may more often need to be a guide, introducer, and facilitator rather than an expert in skills and content.

The school setting should stimulate.

Principals and teachers who work in well staffed and well equipped mainstream settings with gifted and talented pupils find it exciting and rewarding. They find that they not only help the most able children, but they also are encouraged to enrich their own professional competencies and their capabilities of stimulating the other pupils under their tutelage.

Organization for Instruction

The direction that now poses a large challenge to principals and teachers is managing pupil movement and grouping arrangements to be sure that the amount of separation is kept to a defensible minimum and that its true justification is instructional need, not administrative or fiscal convenience. For example, gifted and talented pupils do need opportunities to socialize, plan, work, and discuss with others like themselves. Separate clubs, seminars, and summer institutes for gifted and talented pupils, however, are necessary only if that need is not satisfied in the usual course of regular class activities. Transporting gifted and talented pupils to a specialized school or to special classes is not acceptable. If the gifted are aggregated and separated for ease of staffing or other administrative conveniences, it is questionable on instructional grounds when the grand strategy calls for inclusion rather than segregation.

Good education means inclusion.

Listed in Figure 6–2 are a number of expressions that denote ways of organizing for instruction. Some are suggested by Kaplan's (1975) lists. We have arranged them to indicate the probable degree to which they would or would not require segregation.

All of these approaches may need to be used under some circumstances as bases for organization for instruction. The procedures of choice are those that are most compatible with the greatest amount of mainstream school life for gifted and talented pupils.

FIGURE 6–2
Ways of Organizing for Instruction

Full Mainstreaming ↔ Complete Segregation

- Special schools
- Special summer programs
- Clustered special classes in regular schools
- Limited enrollment seminars and courses
- Resource rooms and clinical centers
- Limited participation field trips and events on school time
- Cluster groups within the regular class
- Limited participation before and after school groups
- Tutoring carried on in regular class
- Independent and individualized study in the context of the regular class

Summary

Gifted and talented pupils soon find that others are interested in them. Business and industry reach out to them by supporting science fairs, junior achievement programs, and major sports drafts. Patriotic and fraternal organizations sponsor essay contests. Private elementary and secondary schools offer scholarships; higher education does likewise on a much larger scale.

Gifted and talented pupils with bodily impairments capture the attention of volunteer and tax supported rehabilitation agencies.

Teachers and principals who are aware of both inschool and extraschool pressures and impediments can be very helpful. Pupils and their families naturally turn to their present and former principals and teachers for advice. Thus, it is important that educators be well informed about where to refer parents and pupils for expert guidance. Moreover, some such pupils from minority or disadvantaged backgrounds do not learn about opportunities unless their teachers inform them and, where necessary, intercede on their behalf. In this connection, it can be advantageous if teachers are knowledgeable about parent organizations and others that take advocacy positions respecting the gifted and talented.

Teachers can be knowledgeable advocates.

The probability seems good that more systematic and widespread services of all kinds will focus on highly able children and youth. Moreover, principals and teachers with special competencies may well find that forward moving schools and communities are highly jnterested in them as prospective staff members.

What Every School with Gifted and Talented Pupils Should Have

This is a minimum essentials list. Principals and teachers can use it and expand on it to review the resources of their schools. It can also be of aid in planning with parent groups or with boards of education members.

An evaluation of school resources is helpful.

Personnel

☐ Teacher-consultant specialist with gifted and talented pupils.
☐ Regular administrative and teaching personnel familiarized with education for gifted and talented pupils.
☐ Pupil personnel staff (counselor, nurse, social worker, psychologist) knowledgeable about special education and services for gifted and talented pupils.
☐ Library staff especially attuned to requirements of individualized, advanced assignments.
☐ Volunteers (mentors, aides) to work with pupils on specific projects, with teacher supervision.

Pupils

☐ All student body familiar with individualized programming, taking part in it to some degree, and expecting differentiated assignments as a matter of course for everyone.

Facilities and Arrangements

☐ Student access to adult library resources on request.
☐ Meeting and work areas and carrels for small group and individual projects available for scheduling for extended time activities.
☐ "Examining out" of regular class work on request.

☐ Records and work area for teacher-consultant.
☐ Extended access by teachers and pupils to regional instructional resources center.

Continuing Education

☐ Twice-a-year inservice update for school faculty and staff.

Program development is just beginning.

America is in the earliest stages of program development for gifted and talented students. Every school system has such students and is, or likely soon will be, under some pressure to move forward on the matter.

Teachers are a fundamental necessity for program development, in every department and at every level of the school system. Specialist teachers will need to be prepared and employed. Also, teachers who have not prepared as specialists but who have acquired basic special education competencies are in thin supply. These factors argue that a shortage exists. There will be a substantial need for professional educational personnel for gifted and talented pupils in the foreseeable future.

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CHAPTER 7

Learning Disabilities

Chapter Outline

- The Challenge to Educators
  - Health Considerations
  - Educational Considerations
  - Mainstreaming
    - The Bloomington Elementary School Model
    - The Zigmond Secondary School Model
    - Summary

- Technology and Special Procedures
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- Educational Classification and Prevalence Rates

- Prevailing Versus Preferred Practices

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- The Role of the Regular Class Teacher, Special Teacher, and Principal
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- Summary
  - What Every School with Learning Disabled Pupils Should Have

- Topical Bibliography

The Challenge to Educators

The most rapidly developing part of special education in recent decades is *learning disabilities*. Every teacher has known children who seemed to have difficulty in learning to read and spell, or in arithmetic, even in the earliest phases of instruction in the primary grades, and for whom schooling became a miserable experience of failure and self doubt. Too often, in the past, such students were neglected in school and the anxieties spread through their families. The challenge of serving such students more adequately has now been joined. It is an acknowledged obligation of teachers and principals to identify and serve children with learning disabilities.

Every teacher knows children with learning disabilities.

Consider the case of Chris Nassar. Chris had always been a "good boy," outgoing and quick. His father, a successful pharmacist, enjoyed Chris, and so did his mother. Two years ago, however, clouds began to mar the school scene.

The second grade teacher had been uncertain about whether Chris should go on or stay another year. He was promoted, but slow school progress persisted. The family's concern mounted along with the third grade teacher's. Chris struggled with language arts skills. His arithmetic computation progress was satisfactory and so was his writing. But he came home with mostly D's and F's in reading and spelling (of course, he could not be expected to spell and write words he could not read). Mischief and class disruption were on the rise, too.

Behavior problems often appear collaterally with learning problems.

At home he was not the same easygoing funster. He did not want to talk about school and was irritable in response to his family's often repeated, "What's wrong, Chris?" The notes about misconduct in school grew more urgent. His early promise of achievement and good adjustment had dissolved, replaced by discouragement and evasion. His mother's words about that time were: "I'd say we were worried about him, and upset, too. We were afraid to talk or think about the future."

Chris's personal dissatisfaction with marginal, increasingly weak, and unrewarding school performance was growing. The directions appeared to be set toward heightened hostility, truancy, frustration induced aggression, and finally, dropout.

The P.L. 94–142 Definition of Learning Disabilities

Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage. [Section 5(b) of P.L. 94–142]

> *As one important developmental phenomenon, the ability to communicate, articulate, and organize through spoken and written language one's internal and external experiences has a profound impact on behavior. Thus, learning disorders theoretically can lay foundations of vulnerability for delinquent and criminal behavior, for severe mental illness, for emotional problems, and for social dysfunction. (Hersh, 1976, p. 27)*

Yet, within a year these conditions were completely reversed. Chris's school attainments satisfied him and his parents. Both could see ahead to using education to help toward competent citizenship and productive adulthood, including pleasure in employment and worthy use of leisure.

How was this magic worked? What happened to shore up Chris's faltering educational development and to establish a firm foundation where there had been serious gaps, slippage, and danger of collapse?

Planning is critical to good teaching.

It was not a miracle, though Mr. and Mrs. Nassar might not agree. It was the result of the solid, systematic, professional work of Chris's homeroom teacher and a learning disabilities specialist who joined forces on his behalf. When what they did is outlined in brief, as it is here, it seems too simple. High quality professional teaching does have an appearance of elegant simplicity that belies the energy, concentration, and control it demands of the teachers conducting it.

First, the teachers studied Chris's records and interviewed his parents and his previous teachers. They obtained the parents' approval to have various tests administered to Chris if the test information might help the teachers to discover how to assist Chris. They *listened* to what the parents and other teachers had to say. They probed to get information about what had and had not been done when Chris first appeared not to be responding satisfactorily to instruction.

Second, they asked Chris to talk with them about his school experiences. They were careful to keep this on a positive and nonthreatening plane. They let Chris take the lead and question them, as he wished, regarding the purpose of the discussions and where they might lead. Chris's record had some good spots in it, even a few recent ones. They showed Chris that they were honestly favorably impressed with that part of his record.

The teachers tried simple procedures first.

Third, they spent considerable time analyzing what the records and interviews had produced. They started with the question: What is the *simplest possible* answer we can imagine to why Chris's educational picture might have developed as it has? It turned out to be inadequate learning of the most rudimentary word analysis skills. If that was what had happened (or failed to happen), and if it had not been subsequently corrected, it would explain Chris's erratic and far below par performance in reading and spelling.

Fourth, they talked with Chris again. They asked him, in private, to read aloud to them from some samples of second, third, and fourth grade texts. When he stumbled on words they watched and listened to see how he proceeded in trying to determine what they were. Then they asked him to tell how he went about trying to unlock the pronunciation of an unfamiliar word. It was true; they saw that he lacked an orderly way of attacking new words. Their empathetic attitude encouraged Chris to talk more about himself and his school work than he had for a long time.

They tried Chris on some nonsense words they had made up, like *stelp, trug, enol, whelgat,* and *wistob.* They taped his efforts and studied them later and confirmed their earlier impression that he was applying a haphazard, self designed set of procedures that were of limited effectiveness in determining how to pronounce a word unfamiliar in print.

Failure to master early rudimentary skills can lead to mounting difficulties.

The fifth step taken by the teachers was as important as their discovery of what Chris had not mastered. This step was the selection of a working hypothesis about *why* Chris had not mastered word analysis skills. Certainly the records indicated that the earlier grade teachers had taught them, that other children in their classes had learned them, and that Chris had been in school during that time. So it was tempting to think that there must be some other factor—undetected minimal brain damage, an emotional block, a perceptual disability—in the way. And did not his recent record of irritability, poor attainment, and disruptive behavior suggest something like that?

The teachers knew, though, that there were dozens of transitory conditions common to these years that were more likely culprits: fatigue, wandering attention, temporary hearing impairment, concerns about social relations, and many others. They also knew that teachers cannot always monitor their pupils' mastery of skill and content as thoroughly as they would wish. So the working hypothesis they elected to follow, at least for a start, was that Chris could probably have learned good word analysis skills and that there had been unsatisfactory or inappropriate initial teaching.

It is important to notice where the responsibility rested. There was something wrong with how Chris had been taught at the beginning and with the follow-through of that first teaching. At the same time, allocating responsibility was not considered the same as allocating blame or impugning the competence of prior teachers. Most of Chris's classmates had prospered under the same teachers. It was a recognition that teachers, like all professional persons, operate constantly with an acknowledged margin of error.

A different approach to instruction might have helped.

The sixth step was to plan, put in writing, and carry out a personalized instructional program to teach Chris the word analysis skills whose absence appeared to be playing havoc with his school life. The teachers conferred with Mr. and Mrs. Nassar, explained the special education program they wished to try, and obtained approval to do so. Most of the work was done in the regular class. Chris was helped to work on his own much of the time. An aide and an older pupil volunteer took part, too, under teacher supervision. The Nassars helped at home. Chris kept track of his own improvement on frequent teacher made, criterion referenced tests. At first, rewards in the form of special privileges were often necessary to keep him at the tasks. Success bred increased satisfaction and keeping a chart of improvement became reward enough in itself.

Being clear about goals and objectives makes a positive difference.

After a few months, the teachers were able to take the seventh and final step. At a conference with Chris and his parents and the school principal, they proposed that the special education program be discontinued. A special program, as such, was no longer necessary. Individualized instruction would continue, but as a normal part of the ordinary course of school events. The teachers did leave the door open to consultative aid, if desired in the future, from the special educator who had been one of the partners in the whole operation concerning Chris.

This is only one example of the many faces of learning disabilities and their educational management. Certainly not all work out as smoothly as this one (and it had many rocky stretches along the way). But the principle is there: The great bulk of learning problems appears traceable to initial instruction that did not attend well enough to a close match between what the pupil needed and what was being taught. Knowing what to do about it, as these teachers did, can turn the problem around.

Health Considerations

Health professionals are interested in children's learning problems.

The teacher's interest in children who have learning disabilities is shared with many other professionals, including speech-language therapists, psychologists, and physicians. A wide variety of terms is used by physicians, psychologists, speech pathologists, and others interested in learning disabilities, including: perceptually handicapped, dyslexic, developmental aphasia, minimal brain dysfunction, neurologically impaired, brain damaged, and others. Neurologists and neuropsychologists have shown particular interest in the area, usually posing an order of dispositions tracing from, first, central nervous system disorder to, second, perceptual disorder and, third, to learning problems. Cruickshank and Hallahan (1975) put it this way:

> Children who have experienced a prenatal, perinatal or post-natal impact on the central nervous system, whether specifically diagnosed or assumed, present highly individualized characteristics of perceptual disturbance. It is assumed by a growing number of persons that environmental and nutritional deprivations likewise produce behavior and perceptual characteristics which are like or closely approximate those of children who have a known specific neurological disturbance. The direct relationship on the neurological and perceptual systems is still subject to investigation, but the issue is significantly joined. (p. 496)

In addition to speculating that there is a defective physiological substratum implicated in learning disabled children, Cruickshank and Hallahan proposed that helpful revelations about prevention and correction may come from additional medical and physiological psychology-based investigations. They suggested specific promise in "such areas as physiology, ophthalmology, otology, reaction to color . . . gustation, olfaction, the tactual modality, and response to thermal change and relative humidity" (Cruickshank & Hallahan, 1975, p. vi).

Another physiological-medical approach to problems of learning disabilities is represented in the work of L'Abate and Curtis (1975). They dealt with learning disabilities under the general heading of "borderline cerebral deficits," linking learning disabilities, emotional disturbances, intellectual retardation, and cultural anti-stimulation in their discussion. They contended that (a) similar appearing child behavior often arises from different groupings of causes; (b) biological and behavioral causes that are implicated can be sorted out and their dimensions specified; (c) causative factors, either biological or environmental, influence each other; and (d) biological factors range on a continuum from zero to overwhelming involvement. L'Abate and Curtis (1975) took pains to remind their readers that, while a search for causes may have a high priority for some specialists, it is an occupation of questionable import to educators.

Etiological findings may have little importance for instruction.

One of the first publications to trigger the enduring concern by physicians in learning problems was Orton's (1937) book, *Reading, Writing and Speech Problems in Children.* A significant movement still exists in teaching by methods advocated by Orton, involving highly structured, multisensory procedures (Gillingham & Stillman, 1966). Whether the success of the teaching methods serves to validate fully the causal theories of Orton, which concerned lateral dominance of the brain hemispheres, is much in doubt.

Other physicians take another approach to assisting teachers and parents to cope with children who show learning problems. They are concerned with *hyperactivity and attention deficits.* Sometimes children are diagnosed as having ADD (attention deficit disorder) syndrome. Such a diagnosis depends heavily on the observations of teachers and parents, rather than on definitive neurological findings, and is thus mainly a descriptive rather than an etiological diagnosis. Nevertheless, medications with tranquilizing effects are sometimes prescribed to reduce hyperactivity and impulsivity and to render the pupil more amenable to ordinary instructional routines. Teachers sometimes report that the medications have undesirable side effects. It is not yet clear whether pharmacological interventions will prove to be effective on a broad scale for pupils who show learning disabilities or only for a selected few.

It is essential, of course, that all children be as healthy as possible. What teachers want most of all from physicians is help in assuring that the children they teach are in good health and able to participate vigorously, attentively, and persistently in learning activities. In addition, of course, it is important to discover and treat any specific medical problems the student may have. Nevertheless, teachers today find themselves more and more recognized by physicians and others associated with the helping professions as the central figures in diagnosing and treating the specifics of learning problems. No drugs or other therapy known today will substitute for the careful teaching of the complex aspects of reading, writing, spelling, and arithmetic, and that is a domain of the teacher's responsibility.

Good general health of children is perhaps the teacher's first concern in contacts with physicians.

Educational Considerations

Few questions rate higher on the day to day agenda of teachers than what to do about pupils in their classes who lie outside their reach—the children and youth who are achieving only very inadequately in basic academic skills and who go untouched by their teaching methods and materials. Whether in disadvantaged central cities, impoverished rural areas, rich farmlands, or tidy suburbs, teachers are distressed when they are unable to make effective educational contact with certain youngsters. Even more so is there distress in such cases in the lives of the students and their families.

The particular circumstances may vary from the science class to the driver training laboratory, from reading to art, and from home economics to spelling, but some pupils who show learning disabilities are almost always there. Teachers are united in their desire for some form of help that will let them cope more satisfactorily with such pupils.

More effort is needed in early grades to individualize instruction and reduce the rates of academic failure.

First priority of concern about such children needs to be given to the early primary grades where problems are usually first evident. It is there that early diagnosis and alternative approaches to teaching can be used to increase the rates at which children are successful and to decrease the incidence of failures in basic skills. But even beyond these early years it is important for all teachers to be knowledgeable about the levels of basic skills of all students and to teach in ways which extend the development of these most important skills. *No teacher can be excused from responsibility for the effective teaching of reading, writing, spelling, handwriting, and basic mathematics.*

Mainstreaming

Every case of learning disability carries a message for mainstream teachers.

In dealing with learning disabilities, perhaps more obviously than in any other facet of special education, there are important implications for mainstream classes. It is not enough just to arrange reteaching and supportive services for students who have failed deeply and tragically in such areas as reading, writing, spelling, and arithmetic; it is necessary, in addition, to strengthen mainstream programs, especially in the early grades, in order to reduce the rates at which such failures occur. No one doubts that the regular teacher has a responsibility to be as effective as possible in the teaching of basic skills. Unfortunately special education policy and funding systems sometimes discourage the deployment of special educators into the mainstream at early education levels to help strengthen basic instruction; instead, special educators are often brought into the breach to do repair work only after students have developed severe problems. That is shown in the very definition of learning disabilities which requires evidence of *severe* discrepancies be-

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Learning Disabled Students in Vocational Education

"More letters come to Closer Look concerning children who have (or are suspected of having) learning disabilities than on any other subject. Of these, the most distressing appeals for help come from people whose sons or daughters are finished with school and face massive frustrations in their search for employment. . . . Opportunities for vocational education in high school for disabled youngsters are still rare, far short of the need. And most vocational education programs are not geared to the needs of learning disabled students." (Closer Look, *1980, p. 1*)

tween expectations and achievements. Demonstrations of the positive effects of earlier interventions are now available,[1] however, and one of the major challenges to educators is to see that promising models of early intervention are implemented broadly.

The discrepancy approach in defining learning disabilities discourages early interventions by special educators.

The Bloomington Elementary School Model

In Bloomington, Minnesota, all public elementary schools formerly used the same basal reading program, which followed the whole word analytic approach. Accommodations to individual differences in this regular program were made mainly by the broad grouping of pupils into ability groups and by differential pacing and repetition for mastery. These procedures produced many school failures and a decision was made to change the system.

The special education department helped to install a different approach for the primary grades. Synthetic rather than analytic, the new approach included the use of multisensory material/techniques and highly systematic instruction; basically, an Orton-Gillingham approach (Enfield, 1976).

The program was initiated by sending special project teachers into regular first, second, and third grade classes, where they demonstrated the alternative methods and helped teach those children whose initial responses to the district's regular program were inadequate. After two or three weeks of help, the regular teachers usually were able to take over the alternative approach; but special education staff continued to help out with new lessons, materials, or techniques, and to consult with the other teachers when requested.

Several characteristics may be noted about this program:

Options are offered within the mainstream.

1. The purpose is to create a more diverse set of options in the mainstream setting.
2. Much emphasis is given to the preparation of regular teachers to handle alternative methods.
3. The children remain in the regular class at all times.
4. The special education staff work directly in the regular classes.
5. Although no child is ever labeled as learning disabled or by any other term, the State Department of Education recognizes the program as one in learning disabilities and provides it with special financial assistance.

Remarkable results have been achieved by this program: (a) The numbers of children scoring low on reading tests have been reduced sharply. For example, as compared with earlier years, the proportion of children falling below the 25th percentile on nationally normed reading tests was reduced by 71% in the first year, and by 83% and 85% in the following two years. (b) The percentage of children districtwide who were below grade level in reading fell substantially. For example, at the second grade level, the percentages below grade level fell from 36 to 25 on reading vocabulary and from 49 to 35 on reading comprehension. (c) The numbers of children receiving specialized tutoring in the categorical special education program were reduced approximately by half. Even more remarkably, the waiting list for such programs was eliminated. (d) The cost of the new program was less than half that of a traditional special education tutoring program. (e) Among the regular teachers, 96% agreed that the program should not be discontinued. (f) All (100%) of the school principals agreed that the program had been successful in their buildings. (g) More than 90% of the parents whose children were in the program wanted it continued. Only 1% said that they would not like to have their children continued in the program (Enfield, 1976).

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[1] See the annual publications of the Far West Educational Laboratory entitled *Educational Programs That Work.* Recent editions of this volume have included dozens of examples of early intervention programs in basic skill teaching that have been judged effective by the U.S. Department of Education Joint Dissemination Review Panel.

Special education programs that avoid child labels can be evaluated.

The school system's new way of delivering special education services does the obvious thing required of any profession: It provides specialized services at the first sign of difficulty. Thus, more children are given the opportunity for successful learning experiences. Consequently, the number of serious casualties, who usually are dealt with too late and in the context of great discouragement and anxiety permeating the life of the child and the family, is reduced. Fortunately, also, the special educators in this project evaluated their efforts carefully and, on this basis, were able to assist the school board in making its judgments. The board has been persuaded of the value of the program and has installed it in all the schools in the district.

The Bloomington program exemplifies a great many of the principles this book is intended to convey:

1. It has been a courageous effort led by well informed people.
2. It illustrates the prime point of mainstreaming practice: The major efforts must go into program development and into really changing the regular class environment, rather than just into moving children about or assessing them in some new way.
3. It stretched many of the special education rules and regulations that, perhaps, would not have been permitted in many places, at least, would not have qualified the project for special education support. By not categorizing and labeling children, the project did not fit the usual patterns of one teacher working with a limited number of children in a special setting, and it focused on many of the functions of regular teachers.
4. The project staff established a good record for helping children and was persuasive with administrators who made decisions about continuation of the program.

Regular school teachers also frequently are involved in collaborative work with special education teachers to serve children who have serious learning problems. For example, resource teachers who are knowledgeable and skillful in very intensive forms of instruction in basic skills often will teach learning disabled children directly for an hour or two each day and then help arrange, in consultation with other teachers and the principal, adaptive approaches to instruction for the children for the remainder of the school day. It is a duty of all teachers to organize all remaining parts of the school program so that they are adaptive and supportive in areas of student needs, thus making a total program that is professionally sound.

The Zigmond Secondary School Model

The example below shows how middle schools and high schools are organizing resource room programs that meet the needs of learning disabled students. This model, developed originally for urban secondary schools and tested in Pittsburgh, has been replicated successfully in a variety of suburban and rural areas.

The model stresses regular class teacher involvement and maintenance of the pupils in the mainstream (Silverman, Zigmond, & Sansone, 1981; Zigmond, 1975, 1978). It is staffed by two specialist teachers for each school, plus a school psychologist. Service is both *direct* to students who spend one or two periods per day in a learning lab and *indirect,* in that consultation is given to regular class teachers so they can help learning disabled pupils in their classes. As Zigmond pointed out:

When the specialist teaches the child, it is referred to as direct service.

> The plight of the student with a learning disability is accentuated at the secondary level because curriculum in the secondary school is developed, interpreted and presented by subject matter specialists. These teachers often lack the psychoeducational orientation which is useful for designing alternative teaching and assessment strategies. There is a need for an interpreter, a liaison between the student and the content teacher to help this student "make it" in the mainstream. One resource teacher assigned to each school building works primarily on a one-to-one basis with mainstream content area teachers who have learning disabled students in their classes. The resource teacher helps the mainstream teacher to define instructional objectives and to develop alternative ways of presenting content information and of assessing knowledge. Courses are not watered down but are altered in terms of methods of presentation or methods of evaluation. For example, since curriculum at the secondary level is not ordinarily presented via multi-media or multi-sensory approaches the teacher consultant may recommend to a content area teacher the use of supplementary materials such as filmstrips or tapes. (Zigmond, 1975, pp. 6–7)

In addition to the specialist teacher who devotes time to being a resource for regular teachers in their own classes, there is a learning lab teacher. This is a specialist in the remediation of pupil weaknesses in reading, mathematics, spelling, and writing. The learning lab teacher also determines each student's interests and motivations through informal talks. The information is used to pick instructional materials and teaching procedures most likely to appeal to the student.

When the specialist consults with the teacher the service is referred to as indirect.

The learning lab itself is designed as an attractive, accessible space for one-to-one or small-group learning activities. During the first month of school the resource teacher and the learning lab teacher jointly visit each regular class teacher, choosing a time such as the homeroom period when there can be some discussion with students. The learning lab is described, and students may refer themselves for assistance. As the learning lab fills, the time of the two specialist teachers is more and more taken up with their separate duties. They also coordinate with the counselor regarding individual pupil schedules, so everyone who needs that information has it.

The resource teacher also holds a series of inservice sessions for small groups of the faculty. Teachers are paid an hourly rate to attend, since the meetings are voluntary and after regular working hours. The content is based on the needs teachers express. The thrust is to improve all teachers' capabilities to accommodate students through individualized instruction.

Inservice content reflects expressed needs.

Acceptance of students for special help is based on a team judgment. It is done at a school staff meeting after educational and psychological data have been made available for all concerned to study. At the meeting are the regular teacher from whose class the student comes, the resource teacher, the learning lab teacher, the school counselor, and one or more school psychologists. Together they make the admission decision and set forth the outline of an individualized educational program.

In the meantime the school psychologist has made a visit to the student's home, explained the program to the parents, and received permission to do the necessary psychoeducational examinations. After the decision to admit the student to a program has been made, the school psychologist is responsible for the due process formalities and for whatever further conferences are appropriate to ascertain the parents' full understanding and agreement.

There is a parent education component with two purposes. One is to explain what the teachers are doing, and why. The second is to help parents learn to deal successfully with learning disability and behavior disorder problems that extend into the home, or perhaps originate there, especially child management and control procedures.

Social and emotional stresses associated with learning problems require attention.

The resource teacher also holds weekly meetings with the learning lab students. In these sessions students are encouraged to discuss the social and emotional stresses of high school life and to talk about post-high-school work and study opportunities, how to improve study habits and test performance, and other topics of importance in clarifying their values and life plans.

Response contingent instruction is an expression used by Zigmond (1975) to denote the particular style of diagnostic teaching found effective with these secondary school students. Instructional material is matched to pupil interests (newspaper sports pages or sports magazines for basketball or football enthusiasts; camera or motorcycle or rock group articles for others). Plans are short range and flexible. What was learned and what continued to maintain interest in yesterday's lesson leads to what is in today's lesson. The results of today's work will determine what is planned for tomorrow.

Students learn to document their own academic progress.

Though based on informal educational diagnosis in the teaching situation, instruction is carefully organized. There is continuous assessment of pupil needs based on error analysis. What the pupil wants to be able to do well, but does not (errors), becomes the instructional goal. The student participates in that decision. Lesson plans follow and so does the record keeping needed to keep track of progress. Students do much of that, too.

The resource teacher, the learning lab teacher, and the regular class teacher join forces to provide the skills students require. They are of two kinds: school survival skills and academic skills. The former subdivide into study skills, behavior control, and teacher pleasing actions. Academic skills include mainly those associated with the language arts and mathematics.

Staff communication is important.

Early experiences with the model highlighted the need for strong and continued emphasis on fast, frequent, and thorough communication among all concerned if the operation were to succeed. The resource teacher reports student status weekly to the referring regular class teacher. The whole faculty and administration of the school receive a monthly newsletter on progress in the learning lab. Monthly summary reports are made by the specialist teachers. Parents receive home visits twice a year, during which report cards are hand delivered by teachers.

Summary

The two models described so far in this chapter for serving students who have learning disabilities illustrate well how regular teachers can be involved in individualized programs which also involve special education teachers, school psychologists, the school principal, and others. They also illustrate how students who need intensive help can remain in regular school settings and still receive the help they need.

Technology and Special Procedures

Theories and instructional approaches abound.

A great variety of theoretical formulations and instructional procedures are available for diagnosis and instruction, some quite controversial. Teachers need to be aware of them. Parents sometimes read or hear about them and bring them up in discussions. Psychologists, social workers, physicians, and other professionals sometimes offer suggestions that relate to their use. In some cases public school systems or private schools are committed to one or another of them. More often, elements of several are combined in an eclectic way. Several of the common approaches are discussed briefly below.

Metabolic

Certain food additives and preservatives, including otherwise apparently harmless coloring agents and flavor enhancers, are believed by some investigators to be directly implicated in triggering hyperactivity, irritability, and other conditions associated with learning disabilities. The precise causative physiological processes are not specified, though certain ones are suspected. The proposed action, of course, is to remove the suspected materials from the diet. Individuals who identify with this concept are Levin, New York Institute for Child Development; Feingold, Allergies Department, Kaiser-Permanente Medical Center, San Francisco; and Conners and Goyette, Western Psychiatric Institute and Center, University of Pittsburgh (Feingold, 1976).

Under the metabolic heading would come, also, attempts by physicians to use quieting or stimulating medications to control or ameliorate hyperactivity, temper tantrums, anxiety, withdrawal, negativism, and other extraordinary emotional states. Such management procedures are outside the scope of the education professions. Yet teachers are interested in their potential effectiveness. To date, too little is known about any of the metabolic based management schemes to make definite statements. To many educators it seems likely that the various treatments, such as use of diets excluding certain additives, may be helpful in a few cases of learning disabilities; the problem, however, is to understand more fully how to find those particular individuals for whom it may be useful.

Metabolic treatments which may be important for a few students are sometimes advocated for many.

Psychoanalytic

This point of view attributes the child's learning disability chiefly to environmental forces, with the focus on the parents as causative instruments because of their persistent use of improper child rearing practices. Attempts are made to improve environmental conditions and to strengthen the child's ego in constructive ways. Proponents of this viewpoint include Bettelheim (1950), Redl (1959), Newman (1967), and Morse (1976), though there are many variations in the details of their recommended procedures.

Perceptual-Neurological

This approach emphasizes processes called perception, attending, discrimination, memory, orientation, association, and sequencing. It is postulated that in children with learning disabilities some of these psychophysiological behaviors are deficient. Proponents of this position consider learning disabilities to be direct consequences of perceptual problems based on neurological dysfunctions. It follows from such a view that remediation is aimed at pinpointing and then eliminating or ameliorating the perceptual deficits through developmental instruction that matches specific teaching prescriptions with specific deficits. Leaders who have developed a variety of diagnostic and remedial procedures that stem from this common formulation include Cruickshank and Hallahan (1975), Frostig (1963), Kephart (1971), Barsch (1967), Kirk (1972), Levinson (1981), and McCarthy and McCarthy (1969). Their work is based on earlier formulations by Werner (1948) and Strauss and Lehtinen (1947).

Instruction may be directed at presumed underlying processes.

It is assumed by these theorists that there is an ordering of dispositions from neurological problems to perceptual problems to reading (or spelling, etc.) problems; and that treatment should be directed to the presumed predispositional level of perceptual problems. Indeed, there are advocates for instruction targeted on the neurological problem itself (e.g., Delacato, 1966). Such indirect, process oriented approaches are viewed by many as lacking in demonstrated effectiveness in transfer to reading or other curriculum areas. Interpretation of research in the area is much in dispute.

Preferred Sensory Modality

Another quite popular point of view concerns preferred sensory modality for instruction. It may be said, for example, that one child is a visual learner while another prefers the auditory mode. Sometimes identities are made such that whole word methods of teaching are considered visual while word analytic methods are considered auditory. Methods of diagnosis have been proposed to identify strong and weak modalities (Johnson & Myklebust, 1967; Wepman, 1951). The research designed to assess the value of modality preference approaches has been inconclusive (Bateman, 1964). Accordingly, it may be best, in most cases, to use a variety of approaches, thus assuring that all modalities are involved in instruction.

Research on modality preferences for learning is inconclusive.

Applied Behavior Analysis

This is the name given to methods of behavior modification based on the work of B. F. Skinner; it depends upon the controlling of the consequences of the person's present behavior. In simplified form, it operates from the principle that behavior that is reinforced systematically will continue and can be brought to substitute for behavior that is not rewarded. There is a substantial literature that testifies to the efficacy of that principal as applied to academic learning (Homme, 1970; Lindsley, 1972). The measurement technology developed by behavior analysts stands as a distinctive and useful approach to learning problems whether or not one uses behavioral principles as a main orientation to teaching (Deno & Mirkin, 1977).

This approach to learning disabilities has as its sole objective the altering of specific behaviors in constructive ways by means of applied behavior analysis. The goal is simply to reshape or reduce the rate of existing behaviors that are inappropriate, incorrect, or otherwise unproductive and to increase behaviors that are more consonant with desired educational outcomes as set forth in educational goals and objectives. Methods involve the precise specification of learning objectives and the management of instruction focused on those objectives in accordance with principles of operant behavior. Measurement activities are a frequent and direct aspect of the instruction. Proponents of applied behavior analysis as a means of dealing with learning disabilities include the leaders named above as well as Haring and Schiefelbush (1976), Lovitt (1978), and a number of others. An excellent and relatively brief exposition of this design for teaching is offered by Haring (1975). The total system for measurement and decision making in special education outlined by Deno and Mirkin (1977) is widely used.

Measurement is a frequent, integral part of instruction by behavioral methods.

Behavior modification by methods of the behavior analysts has not yet demonstrated its absolute range of applicability. It has advocates who are very optimistic but it has skeptics who believe it has a very restricted range of effectiveness. Proponents of behavior modification arouse defensive reactions and provoke counterattacks on two highly sensitive points. The behavior modifier expresses no need for the notion that "deeper" roots of human behavior must be uncovered, understood, and rearranged to bring about lasting and balanced changes in humans. Instead the behavior and its cause are all one; there is no gain either in insight or in technique of management by noting the behavior on the one hand and probing for separate causative factors on the other hand. Also, the direct approach of behavior modification (and perhaps the expression itself) smacks to some of the denial of human freedoms, particularly free will and freedom from domination and direction by others. There is a substantial and growing literature on these and related issues. See Skinner (1971) or Carpenter (1974).

Remedial Education

This formulation for the assessment, correction, and future prevention of learning disabilities has its main roots in remedial instruction as formulated by curriculum leaders in regular education. The conceptual structure is as follows:

The traditional remedial reading program is a form of personalizing instruction that can be applied in the regular class.

1. Despite the best efforts of contemporary teaching in regular classes some pupils are not reached, so they do not learn language arts (particularly reading) or mathematics skills or they learn them only partially.
2. The reason for the learning failure is that the teaching is not sufficiently individualized or personalized.
3. The children for whom the regular class teacher's efforts are not sufficient should be noted as soon as possible and consultation should be requested from another teacher who is a remedial teaching specialist.
4. The particular disabilities shown by the child are then identified; corrective teaching plans are made; and remedial teaching is started by one of the teachers or both.
5. As learning problems are identified and corrected at a very early stage through personalized instruction, the whole operation becomes more effective and the need for remedial instruction is reduced.

Particularly important is the freedom of the regular class teacher to ask for assistance without fear of reprisal. That point looms large because this formulation puts the responsibility for the child's difficulties mainly on limitations in initial instruction. Professional maturity of a high order on the part of administrators, supervisors, and teachers alike, plus an informed public, are called for if it is to work.

An Eclectic View

We think it is defensible, indeed appropriate, to take an eclectic position with respect to these several views concerning learning disabilities. In general, we think it wise—considering the present state of knowledge—for teachers to work mainly with stimulus materials at the "level of the lesson," to teach directly for what one wants the child to learn. No doubt there are some few students who have suffered neurological insults, who will need to be studied and taught by less direct approaches—but we think it is not parsimonious to formulate *most* learning problems in terms of a perceptual neurological deficit theory. As a first approach it seems wiser for teachers to proceed mainly on the basis of curriculum-based assessment and instruction.

Most instruction should proceed at the "level of the lesson," rather than in terms of "underlying processes."

Similarly, while it is apparent that some students will need to be taught by methods that emphasize one sensory modality or another, most students will profit from balanced, multisensory approaches in the teaching of basic literacy skills. Fortunately, methods have been developed by creative educators which make it possible to choose approaches which are differential in their dependence upon the various sensory modalities. Nevertheless, we again believe that what may be true for a few should not immediately be extended to the many. There is no strong evidence that classification of most learning disabled children according to preferred sensory modality or various expected patterns of cross-modal transfer is justified. Similarly, we think there may be occasional children for whom special diets prove to be helpful; but there is no evidence to show that changes in diets for masses of children will solve learning problems.

Research evidence does not support widespread classification of children according to sensory modality preferences.

We think it would be foolish to ignore the important contributions of the applied behavior analysts in measurement and decision making and in contingency management, while feeling at the same time that they have, at least so far, made relatively little contribution to the development and ordering of stimulus materials for the teaching of basic skills. Behavioral methods can be applied with great varieties of instructional materials.

In sum, a good learning disabilities program today will be alert to possible perceptual problems and show readiness to use specialized resources when clearly indicated; will use approaches which favor one sensory modality or another when the student obviously lacks capacity in a given modality; will carefully use measurement and instructional principles advanced by the behavior analysts; and will seek to profit by the enormous body of work done by curriculum specialists in such areas as remedial reading, mathematics, and spelling. In the good program, we think, the teachers will be broadly resourceful educators, profiting from insights from many quarters. *They will be skeptical of theories which claim to offer specialized approaches to the many which in fact have been demonstrated to apply only occasionally.* In the main, they will use materials directly relevant to the curriculum rather than materials which teach indirectly for skills assumed to transfer later to the curriculum.

Teachers, principals, and parents should be skeptical of knowledge claims which are based on only occasional successes.

Our preferred assumption is that most students who exhibit so-called learning disabilities need and will profit from reteaching in highly structured form directly in the problem domains. That is, they need carefully arranged developmental teaching in reading, spelling, writing, or arithmetic. What is needed is an assessment of where the student is in achievement within the framework of a rational developmental sequence in the skill area. Teaching should begin at that level and proceed in carefully sequenced steps from success to success. All that is known about structuring lessons, motivating students, and measuring progress needs to be applied in that enterprise.

We think that what is "special" about such education is its intensity and micro-level management and that only infrequently is the problem well understood in terms of some special perceptual, dietary, neurological, or sensory anomaly. Finally, it must be said that children develop high level basic skills only when they have given a great deal of concentrated time to them. One of the great challenges in the case of children who have failed in basic skills is to restore their self confidence and to bring them to massive amounts of experience in areas needing improvment. To achieve such attitudinal breakthroughs and commitments requires principals and teachers who care deeply about students and are able to express that commitment in a long continuing way.

Educational Classification and Prevalence Rates

The incidence and prevalence rates of learning disabilities vary greatly from one community to another.

How many pupils show learning disabilities? Replies range from a low of about 2% to a huge 25% of all children and youth; others hold the position that it is improper to give a figure because the matter is relative, not really quantifiable, and constantly changing. Rates of learning problems vary so greatly from one community to another as to make an overall figure quite meaningless. On the other hand, it is necessary to specify the problem in some way in order that public support can be developed in a meaningful way.

In connection with the passage of Public Law 94–142 the U.S. Congress directed the U. S. Commissioner of Education to develop a definition of *learning disabilities* and, for a short time in the late 1970's, to limit funding under the law to not more than 2% of the general child population. It turned out that the task of providing one clinical definition that was acceptable on a national basis was difficult, and the Commissioner advanced instead a *process* definition of learning disabilities—one that would require school authorities to follow procedural guidelines in identifying individual children as learning disabled. The primary requirement under the definition was that the student show a *severe* discrepancy between ability (or aptitude) and actual achievement which was not primarily the result of other handicaps (vision, hearing, motor, mental retardation, emotional disturbance) or of environmental disadvantages. No specific definition of the term *severe* was given and other difficulties of definition were encountered, but the process approach was accepted and the specific "cap" of 2% for learning disabilities prevalence was dismissed. An overall cap or control at 12% for all categories of handicaps remained under Public Law 94–142, however, which had the effect of limiting learning disabilities to some part of the overall 12%.

Discrepancy approaches to the definition of learning disabilities present many problems.

What remain as the primary approach to defining learning disabilities in most communities are the *discrepancy* and *exclusion* principles. These are related concepts in that the very presence of a discrepancy between presumed capacity and achievement is what serves to exclude the classification of a poorly achieving student as mentally retarded. The usual discrepancy formu-

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U. S. Court Tells New York to Aid More with Learning Disabilities

A Federal judge has ruled that New York State's method of identifying children who have learning difficulties violates Federal law and has ordered the state to tell tens of thousands of parents their children may now be eligible for help....

New York City screens an average of 5,000 pupils a month for learning disabilities. So far, 23,413 have been identified as having the handicap throughout the state. Citing the testimony of experts across the country, the plaintiffs in the current case argued that if screening procedures were less arbitrary, the figure would be nearly four times as great....

Where an eighth-grade pupil with a reading score of 4.6 would have been denied special help in the past, because his reading level was above the 50 percent mark (fourth grade), he now most likely would be entitled to special tutoring....

In the city alone this year the parents of more than 50,000 children asked for special placement. Of these only 10,000 were selected. (New York Times, July 2, 1980, pp. A1, B3)

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lation puts too heavy a burden on presumed measures of the child's "ability" or "capacity," usually based on mental ability tests. Such tests are not worthy of that much confidence in the kind of planning teachers are doing in day to day instruction. Even such worthy tests as the full scale Stanford-Binet Intelligence Test or Wechsler Intelligence Scale for Children (WISC) fall short in this regard; their own subtests and other shorter, independent tests like the Ammons or Peabody Picture Vocabulary Tests, are even less satisfactory.

Differences are not readily distinguished.

Two recent studies show that children identified as learning disabled are not distinguishable as a group from other groups of low achievers except possibly in the degree of severity of their problems in basic skill areas. Warner, Schumaker, Alley, and Deshler (1980), who studied secondary populations of learning disabled (LD) and other low achieving (LA) students, concluded as follows:

> The data we have presented raise a final and important question: If LD and LA students are so similar in their characteristics, why have certain students been labeled, whereas other similar acting students have not? Our data offer few answers to this question....A contributing factor may be that parents of LD students serve as better advocates for their sons and daughters.

Ysseldyke, Algozzine, Shinn and McGue (1979) reported similar findings of difficulty in separating LD children from other underachievers by any objective means. Such studies obviously complicate the issue of how many children with learning disabilities there are. For some, such studies raise an even larger question: "Are we looking for differences where, really, there aren't any?"

The relationship between the categories *learning disability* (LD) and *educable mentally retarded* (EMR), always a problem, also has become particularly troublesome in the wake of the *Larry P.* case and other onslaughts on the

With limitations on IQ test use, distinctions between EMR and LD categories tend to disappear.

concept of "capacity" or "expectancy" for learning. The distinction between the LD and EMR categories has rested mainly on presumed differences in predispositional states for the learning problems. In the case of students classified as EMR it was assumed that the learning problems resulted from low capacity for learning as measured (most often) by an intelligence test. Thus, a profile reflecting aptitude for academic learning and actual academic achievements would be relatively flat or show no *severe* discrepancy. On the other hand, students considered to be learning disabled would show relatively high capacity for but low achievement in academic skills. (The poor academic performance of LD students was to be explained by perceptual problems based in neurological problems or possibly on behavioral or emotional problems.) The complication has arisen when the categorization of children as EMR, based on intelligence tests, was removed—as in the *Larry P.* case. The effects of such a decision run not only to the EMR category but also to LD. When only the child's achievements in various academic areas were considered and not the child's *presumed* capacity for such learning, the distinction between the categories of EMR and LD was erased.

Minority children have tended to be classified as EMR while others are classified as LD.

Other problems of classification are mixed into these difficulties as well. The EMR classification has tended to be applied to minority children in high proportions, while the LD classification has been assigned mainly to White middle-class children. Such differences in rate of terminology usage for racial and economic groups have become insupportable and even possibly illegal, especially when the distinctions are based on doubtful formulations of capacity for learning or other presumed predispositional traits of children, rather than directly on their learning performance.

Plainly, there is great difficulty in defining who the *learning disabled* are and that introduces problems of defining incidence rates. That means at least two things for teachers. First, it will be necessary to proceed with caution in talks with fellow instructors, other professionals, and parents to avoid misunderstandings. There are many points of view, often held with great certainty but limited evidence. Second, there is ample opportunity for teachers, individually and as organized groups, to put forward their concepts and needs concerning the problems of learning disabilities. *What really matters is that all teachers are enabled to become efficient instructors of children who have shown difficulties in learning.*

IQ's and Learning Disability

William Cruickshank, one of the pioneers in education of children with learning disabilities, has argued against the use of IQ cutoff scores in defining learning disability.

> *"If we were to pile up all the learning disabled children by I.Q. in the State of Michigan, a pyramid would result with the greater number in the so-called educable and trainable and profound groups of mentally retarded. There are intellectually normal and some intellectually gifted children with learning disabilities." (Cruickshank, 1980, p. 16)*

In many school systems a team of professionals, working with parents, determine whether a child has a learning disability. The team commonly includes the student's regular teacher, a special education teacher competent to deal with learning disabilities, and a school psychologist, speech clinician, or reading teacher. The team is appointed by the school principal following guidelines for special education programs set by the school district.

Team approaches rather than strictly psychometric approaches are desirable in studying children with learning problems.

One of the strengths of this approach is that a variety of views are considered in studying the child and the school situation; also, the teachers are well represented. The team may override the outcomes of a strictly psychometric approach to diagnosis by presenting and agreeing on evidence they consider more significant.

That leads to the crux of the matter. Most pupil behaviors called learning disabilities are best acknowledged as the consequences of failure to provide enough high quality individualized instruction. The problem does not reside in the child, hidden in some mysterious physiological or psychological recess. It rests squarely in the hands of school principals, psychologists, and teachers, and its resolution depends on the degree to which they design and carry out personalized teaching.

Considering the difficulties of defining learning disabilities (LD) and the specific breakdown occurring in distinctions between LD, EMR, emotionally disturbed (ED), and behavior disorders (BD) categories, plus the expectation that learning problems are often associated with behavioral and self concept problems, generic or cross-categorical approaches in the schools probably hold most promise for children who in the past have been separately labeled and separately placed in accordance with these categories. *The instruction required by most children who are called LD, EMR, ED, or BD is not readily distinguishable.* Therefore, it does not require teachers trained in separate places by category and then deployed to separate narrowly framed enclaves where they serve only students with labels corresponding to their certification label as teachers. One of the most valuable outcomes for children of the least restrictive environment principle is a melding across categories as special education is developed in as widely decentralized forms as possible.

Prevailing Versus Preferred Practices

In the left column are summary statements about the common practices of school systems in attempting to minimize or eliminate learning disabilities among pupils. On the right, in contrast, are summaries of procedures that, while not yet common, are used by the most forward looking schools of the nation.

Prevailing Practices	Preferred Practices
1. Screening and diagnostic tests, mostly norm-referenced, are used in elementary schools to identify pupils who show discrep-	1. Screening procedures are used at preschool levels to identify students who show obvious problems in language development

Local schools coordinate assessment.

The regular teacher remains in charge.

Prevailing Practices	Preferred Practices
ancies between "ability" and "achievement." Such students are labeled as learning disabled and enrolled in a special education program.	and who may be "at risk" for learning problems. Such children are not labeled LD, but intensive assistance is provided to them to reduce incidence rates of learning problems at school-age levels.
2. The major part of the assessment of learning disabled pupils is done by persons from a district or regional office, on referral by the special and regular teachers, through the principal of the school.	2. The assessment of learning problems is done by the special and regular teachers of the local school, with the diagnostic help of any others on the local school staff who have skills to contribute. The assessment is coordinated by the regular teacher or a designated local school person. Regional or central office staff with specialized assessment qualifications are used as consultants and often as trainers to maintain and upgrade local school staff members' assessment capabilities.
3. When a child is identified as showing characterisitcs of learning disabilities, the child is placed on the special education teacher's roll and the regular class teacher has little or no responsibility for pupil accounting and other functions related to class membership.	3. The identification of a child as having learning problems is a signal to the regular class teacher that there will be added help of a variety of kinds with the child's education, but the regular teacher's class membership responsibilities remain intact.
4. There is scrupulous attention to the legal requirements for informing parents and receiving their prior consent for program changes. Most communication is by mail.	4. Communication with parents is done in conference whenever possible. Emphasis is on both compliance with regulations and full parental participation in decision making.
5. Pupils presenting the same kinds of learning problems are found under diverse names, ranging from brain injured through dyslexic and programmed primarily in terms of those labels.	5. All pupils presenting learning problems, regardless of labels, are under the same school system leadership and programmed in terms of their educational needs. This results in what might be called cross-categorical groupings.

Prevailing Practices	Preferred Practices	
6. Work with learning disabilities is considered the right and privilege only of those who have specialist training in one or more categorical fields, such as the brain damaged or the perceptually handicapped. There is a sharp separation, for example, from professionals who work in "remedial reading" or mental retardation.	6. All teachers and other educators with special training and knowledge about individualized instruction are welcomed as team members to help plan and implement instruction for children with learning problems.	*The team approach prevails.*
7. Special education teachers are allowed to work only with "identified and enrolled" learning disabled pupils, at the risk of losing state aid. In general, this means that most LD students are at third grade level or higher and have already experienced long and serious failure in school.	7. Special education teachers routinely help to assess and teach some children who are experiencing difficulty but who are not officially on special education rolls. Intensive efforts are made in the primary grades to individualize programs in reading and other basic skills to help prevent later serious learning problems.	*Special services are extended.*
8. Special education teachers work in their own classrooms or resource rooms with learning disabled pupils, seldom spending time with regular class teachers and pupils in their regular learning areas.	8. Special education teachers commit most of their time to team assessment, planning, and teaching with regular class teachers in regular classes.	
9. There are annual program reviews and reassessments of learning disabled pupils to comply with state regulations. They are conducted mainly by personnel from district and regional offices.	9. Annual or more frequent program reviews and reassessments are made by the local school teachers responsible for the pupils. The reviews are part of continuing diagnostic teaching and they frequently go beyond what state regulations would require.	*Reviews are child-centered.*
10. A mystique is associated with learning disabilities, often resulting in uncertainty on the part of parents and teachers as to their	10. Learning disabilities are acknowledged to fall clearly within the educator's domain, and there is reasonable con-	

own abilities to cope with and help their children.

fidence on the part of teachers and parents that systematic, individualized instruction will be effective in dealing with them.

Illustration of an Effective School System Program

Public schools continue in their shift from the *class* to the *individual* as the basic unit around which special and regular education are planned, organized, and conducted. As that move accelerates, it will become less and less necessary to use categorical labels to identify pupils. Rather, *each* pupil will receive personalized education and *every* pupil will be special, in that sense.

Vallejo City Unified School District

Unifying regular and special education programs requires the leadership of the school principal.

Wardlaw (1976) related his experience as principal of an elementary school that moved regular and special education together by attending primarily to designing all instruction for individual pupils. In Wardlaw's highly personalized and anecdotal account, it is valuable to look for evidence of the step by step process by which teachers "worked through" the process of program development. Here it is recounted from the perspective of a principal.

> □One of my first teaching experiences was in an elementary school that did have special education classes in the building. I knew that the children were different; I knew that they were labeled handicapped, but they really did not bother me and there was no big interaction. At that particular time in my career (maybe this is a continuing thing), I was really trying to get my act together as a teacher in terms of survival training.
>
> I became a teaching principal—this was a tremendous transition in terms of preparing for a principalship or an administrative position. Then my career took an interesting twist. I became a principal in an economically depressed area, where Black students composed 99% of the school population. This was before the existence of categorical aid programs; before such programs existed for learning disabilities or educationally handicapped.

Too often, in the past, special education classes were located wherever space was available.

> I next became principal of an elementary school that housed four different special education programs. They were impaired hearing, visually handicapped, educable mentally retarded, and trainable mentally retarded. These separate programs were a part of an elementary school of approximately 700 students. Suddenly this program changed. As the result of [rezoning and] enrollment shifts, we were left with just one special education program—educable mentally retarded. This switch . . . (1) increased our minority population, (2) reduced the economic level of the parent population that we were serving, and (3) resulted in a much more diverse parent and student population.

It was when we were confronted with meeting the needs of the special program for the educable mentally retarded plus the diverse student population that our efforts toward mainstreaming began. I don't think [that is] particularly unique. There are a lot of principals throughout the country that have a similar kind of background and have had similar kinds of experiences in their administrative careers.

Program Changes Leading to Mainstreaming

I am going to tell you about a mainstreaming program that worked. It worked for our staff. It worked for our parents. It worked for our district. Most of all, it worked for all of our students. Research-oriented people might say "What were your measures? Show us your results."

One of the first things I need to say for a very political, bureaucratic, parent-related reason is that we increased reading and math scores. You now know that we were paying attention to basic skills. I don't think increased math and reading scores were our most significant results, however. We were also paying attention to student personal and interpersonal growth. We did this by a variety of measures. We did it by opinionnaires and teacher- and student-designed assessment measurements. From a principal's point of view, the following factors were the most important indicators of the success of our program:

Improvements were noted on variables that were totally non-obtrusive in classroom activities.

- Attendance was improved.
- Office referrals (from classroom and playground) were reduced.
- Bus referrals were reduced.
- Community contact became more positive.

In fact, we had a noticeable increase in parent support. Attendance and attitudes at parent-teacher conferences were entirely different. We had an increase of volunteer aides. Parents started coming into the classroom and helping the teacher with instructional tasks. We had a reduced number of phone calls or complaints from parents and from central office personnel.

Another measure of parent support became apparent when we began to get into scheduling changes, such as changing the length of the school day for students, changing the length of the school day for parents, changing our reporting procedures. We had developed stronger and more positive support from parents than we had before we began the project.

What were some of the factors that helped us achieve the results that I've quickly related to you? One of the first things that we did as a school was to examine our general education program.

In planning changes an important early step is to review what others have done and learned.

It's interesting remembering one of the first activities we attempted in looking at ourselves. We contacted Pat O'Donnell who is now Chairman of the Department of Special Education at California State University, San Francisco. We asked him if he would come to Vallejo and help us by presenting a course on the problems and issues of individualization and change. I don't know if Pat fully realizes the implication of his initial survey course on change

Ideas from elsewhere can best be adapted not adopted.

and individualization for our staff. We followed that course with visits to nearby places such as Napa and Sonoma. We took a look at their existing practices. We reviewed the literature and conducted staff seminars on some of the recent innovations and attempted to apply them to our own school practices.

After the period of inservice training, visits, and observations, we tried a special project, developed as a result of studying some of the programs designed by Dwight Allen. We operated a flexible scheduling team-teaching project (FSTP) at the upper grade level, including our educable mentally retarded students in this project. We ended up with a superdepartmentalized program with minicourses that were unbelievable. There was a heavy emphasis on grouping by academic achievement. We had good academic results and were able to show considerable growth on our achievement test measures.... One of the most valuable results from this project was an increased awareness of the diversity of our students and the widely different skill levels indicated by using such measures as standardized diagnostic instruments. Individualization became an impossible task, so we had to stop at that point and reassess where we wanted to go.

Changes in direction are sometimes necessary.

At about that time, we were introduced to Madeline Hunter at the University Elementary School (UES) at UCLA. We were able to send a number of our staff to UES, and Dr. Hunter was able to come up to our school, where she provided some outstanding staff retraining programs. This retraining effort forced us to reexamine our goals for education in relation to individual differences, classroom organization, and classroom strategy. We began to focus on such areas as diagnostic-prescriptive and evaluative approaches for classroom teachers. We began to look at the needs of kids in an entirely different way, more than just improving reading and math. We became concerned with the learning environment and the degree of personal and interpersonal growth. It forced us to reevaluate some of our assumptions about education. How did we feel about differences? What were we doing to promote the uniqueness of youngsters? Were we behaving in a manner that was facilitating or promoting trust and respect? What were we doing about independence and responsibility?

Self study is the most sound basis for improvement.

Several important questions related to discipline. Is it separate from instruction? Do you teach math here and discipline over there? Were we caught in a rut of saying, "If we could only get rid of the discipline problem, then we could really improve our math program. We could complete more of our individual contacts in reading." What about humanism? What about increasing the role opportunities for our students?

Teachers with excellent pupil management skills tend to get better academic learning results, too.

About this time, Dr. Keith Beery came on the scene with Project Catalyst. Dr. Beery's main input to our staff was providing assistance for the staff development efforts that were already underway, but with the "mainstreaming concept" in mind. He provided important technical assistance in developing classroom and school level measures for making daily instructional decisions regarding personal and interpersonal growth. Keith not only had the idea but an implementation plan. In his own way he showed us how we might try to heat the ocean a little bit.

Our Model for Mainstreaming

Our mainstreaming project involved eighty students in the 10–12 age group and three teachers (two regular teachers and one special education teacher). We used the multi-age grouping, team-teaching organizational plan; our definition of team teaching (based upon the research of Goodlad and Anderson as practiced by Dr. Madeline Hunter at UES) is a group of two or more teachers who will be responsible for the planning, teaching, and the evaluation of all the youngsters. That doesn't mean that they had equal responsibility for all the youngsters, because we certainly grouped and regrouped according to teacher and student developed criteria.

Both students and teachers have unique styles of working in the schools.

First, we assessed each student's learning style to determine his degree of student-teacher dependency. We tried to match teacher style to learner needs. We certainly were working toward increasing teacher shared responsibility and competencies so each instructor could be more effective with a wider range of students; therefore, each teacher was teaching all academic areas and as many different skill levels as he could productively manage.

The team viewed its existence as being dependent upon producing a better instructional program. Its members were committed to sharing the richness of the resources that they offered each other. There was a constant questioning of whether their team structure was offering something better than what they had been able to offer as self-contained classroom teachers.

All the usual barriers reported by special education people were problems that we encountered in our project.

Problems were recognized, faced, and resolved.

- We certainly faced the problem of attitudes of both special and regular education personnel. I felt that it was the number one problem.
- Parent support was a big issue. We were pleased with our improvements.
- Student attitudes mattered very much to us. They helped us value the importance of diversity.
- The level of administrative support one receives can make or break a program.
- Buses can be a major factor. Transportation can control your whole program. You can have all sorts of fine plans, and then they all depend upon the bus schedule.
- Teacher organizations had to be involved. We have teacher organizations in Vallejo, and they have similar kinds of feelings as their colleagues throughout California and across the country. They are a factor to be dealt with, to interact with positively.
- Personnel at other schools was a concern. We were taking a risk in developing the program. Naturally, there was some anxiety regarding our program elicited from personnel at other schools.
- Curriculum revision is a monumental task. Mainstreaming can really open that bag. Some people spend a lifetime working in one particular area of curriculum, but we are talking about revising curriculum for the whole school. I think we made significant progress, but I don't want to infer that we completed the task. We developed some processes for improving our curriculum.

- We had some dropouts. We didn't succeed with all students. There were some parents and some children that did not succeed in our mainstreaming model. We've learned something from it. We now know more ways to help youngsters succeed in a mainstreaming model.

Better education depends upon better information about students.

We achieved an entirely new level in understanding ways of evaluating information that's important to us at the school site. We now have instruments for collecting data. In terms of on the firing line, in the trenches, working with kids in the daily situation, we now have better information than we ever had before.

Present Views Regarding Mainstreaming

How do I feel about mainstreaming? I have increased respect for the concept. I believe I have an increased commitment to attempting to achieve a successful mainstreaming model.

"... Special education proved to be a resource for improvement."

However, I now have an increased awareness of the dangers of moving too fast and getting into mainstreaming for the wrong reasons. In our particular model, special education proved to be a resource for improvement. In our particular model we began to value differences as strengths. This is a different point of view from what I hear from some special education people. It is important that special education personnel know that general education is developing a number of programs in the area of mainstreaming. The California Early Childhood Education Program is a tremendous example of trying to promote a diagnostic or prescriptive approach. I think the major implications of the Reform of Intermediate and Secondary Education (RISE) are related to the concept of mainstreaming.

A word to the college people. From a school level perspective, we view colleges as producing better teachers than we've ever had before (teachers for both general and special education). We are delighted with the new young teachers your teacher-training programs are graduating. We are finding more competent, better trained teachers in our district than we've ever had before. That's an exciting situation.

The school principal is the pivotal figure in change.

In our model, we viewed the principal as the key. So, aside from what college teacher-training programs are producing, one of the real issues that is facing us, in my opinion, is a retraining of administrators. I think some of the things that Bill May, Assistant Superintendent of Public Instruction for General Education, is involved with in Sacramento, such as the Right-to-Read Program, have to do with school level planning; and that certainly should involve principals and their staffs. Principals will be required to develop staff organization [and retraining] plans in a manner that was not expected previously.

"The greatest good we can do for others is not just to share our riches with them, but to reveal their riches to themselves." How does this relate to the role of the special education personnel within the mainstreaming concept? From my point of view, based upon our experiences in Vallejo, successful mainstreaming programs include:

- Practices that facilitate and promote uniqueness of all people
- Practices that promote humanism
- Practices that focus on providing specific curricular objectives to meet the specific learning characteristics of the learner

These practices will, in my opinion, increase the need for and utilization of special education personnel at many different levels and in many different roles. (Adapted from Wardlaw, 1976, pp. 190–196) ☐

Experienced staff, too, may profit from renewal training.

The Role of the Regular Class Teacher, Special Teacher, and Principal

Teachers, working with principals, are the best judges of how human and material resources ought to be deployed within a school to get the best results. If given the opportunity, they will work out how to put together the combinations of people and materials with the optimum potential for productivity. That is well illustrated in Morse's (1976) account of how the helping teacher position evolved in elementary schools with which he was associated over a period of approximately 16 years. His narrative tells a story familiar to many educators in elementary, secondary, and vocational schools who have been engaged in reconstructing programs in accord with new policies on exceptional students.

Following is a summary of steps the faculty of 30 teachers in a 780-pupil school took to assure that good accommodations were made to the special needs of children showing learning and adjustment problems.

1. The majority of the faculty of the school recognizes that there are pupils in most of the classes whose learning disabilities are an effective barrier between them and the teacher so far as instruction is concerned. Teachers discuss this informally and in faculty meetings.
2. They consider the establishment of a separate special class for the pupils whose presence contributes most to the school's problem incidence, both in academic and in school citizenship ways. They review the following points:
    a. If one or two special teachers were added to the school's staff to conduct one or two special classes, and 12 to 24 pupils were assigned full time to these teachers, would the present situation be adequately resolved? No, even assigning the maximum of 24 pupils to such special classes would not suffice, because almost every one of the 30 regular class teachers can already identify two or three pupils with whom they would like help immediately, and there are others, though they do not require help so urgently.
    b. If enough special classes were provided to enroll all the designated pupils, would that suffice? This is not feasible. It is unlikely that the community would feel it could afford to add even two or three special

Separate classes for exceptional pupils often offer too little as a solution to learning problems of students.

teachers. Also, placing these youngsters in special classes would not solve the problem, for others are sure to come along who would have to be put on waiting lists for already filled classes. Moreover, not all these pupils need special attention all the time, or even the majority of the time. What is really wanted is help in the regular classroom "crisis," or better, help in predicting it and preventing it.

c. The track record of full time special classes, when closely examined, turns out to be less than encouraging.

3. The analysis of needs, when thrown against a possible solution by way of special classes, reveals to the faculty that the need and proposed special class solution are not compatible. The requirements of the regular class teachers could be met only to a limited degree through separate special classes. Perhaps clues to what would help could be derived from a closer inspection of the problem itself. The next step in study by the faculty reveals that:

The program plan needs to develop uniquely in each building.

a. A wide range of academic achievement and social behavior already exists in each class. Teachers cope well with most of the range. Most of the pupils gain academically and socially. It is only a few in each class about whom teachers feel incompetent or defeated.

b. Even the most difficult pupils are not that way all of the time. Even the most troublesome and the weakest achievers mesh well into class activities and have friendly, or at least neutral, relationships with other pupils much of the time.

c. Teachers can often predict when to anticipate academic learning or social behavior difficulties with pupils. With that knowledge, teachers have already taken the initial steps, informally, to assess the particular strengths and weaknesses of their most troublesome pupils and have located some of the mismatches between pupil readiness and upcoming learning tasks.

d. Attempts to repress a pupil's disruptive behavior by harsh words, extra work, temporary removal from the class, ridicule, or other forms of punishment prove to be of no permanent value in reducing the problem.

e. Advice from counselors, psychologists, the principal, or from other teachers is of little practical use. Many teachers already understand the advice; however, what is lacking are the extra arms and legs to put it to use. These staff members are more talkers than doers. Their encouragement and sympathy is appreciated, but it is not a substitute for direct participation in teaching, which they have too little time to do. Even when they do take on a child or a group in the class for a time, it is seldom for long enough or is seldom regularly enough to have a lasting effect.

4. After that analysis, the regular class teachers conclude that they do need direct in-class and in-school help. Rather than a separate special class or

expert but nonparticipating consultants, though, the help should have these characteristics:

The main focus is on crisis management and crisis prevention.

a. The helping person should be capable of working with the emotional and academic problems of all children, and particularly the child who is in, or close to, a crisis. The training of this person should be that of a teacher and a specialist in learning disabilities and behavior disorders.
b. Help should be present right in the school, not from an itinerant or central office base. And the helping teacher should neither be under rigidly scheduled external control nor tied to a classroom of children. Flexibility for direct and timely cooperative work on call from a regular class teacher should have high priority.
c. Sometimes the most helpful immediate action might be removal of a child from the regular class for a conference or a quiet time under the visual supervision of the helping teacher. At other times the helper might conduct the regular class, while the problem of a particular child or a small group of children is given the full, concentrated attention of the regular class teacher. At still other times the helping teacher might team with one or more regular teachers to select or prepare individualized teaching plans and to locate the best instructional materials with which to implement them.
d. The actual day to day duties of the helping teacher must grow out of the reality of the specific school, its community, its resources, its pupils, and the competencies and needs of its regular class teachers. The helping teacher needs to be more responsive to the local situation than to restrictive theories, categories, and regulations. There should be freedom to be eclectic within the bounds of professional monitoring provided by the oversight of the local school faculty.

It helps greatly if there is flexibility in programming and not too many restrictive conditions about categorizing.

The four step process, with its subordinate points, does not happen in a few days. Often it is a year or more in progressing from beginning to end. Also, it does not move smoothly and evenly. Changes of personnel, community pressures, and other factors can materially alter its pace and its course. Yet, when the regular class teachers on a school faculty think through together how best to give effective aid to pupils who falter, the four step model fits the process.

It is important that regular class teachers know and understand how their colleagues elsewhere have worked together to improve the educational management of pupils who show learning disabilities. It is questionable whether knowing about this kind of process will allow it to be telescoped or shortened because each school's situation will have unique features that will necessitate careful, step by step discussion and resolution. The value of recognizing a process model lies more in the reassurance it gives that such matters have been and can be worked out in an orderly way by regular class teachers, as well as in the framework it supplies for planning and implementing the process with optimism.

Teamwork with Specialists

The interest taken in learning disabilities by various professionals in addition to educators has spawned an array of specialists. That has positive value. With difficult problems it is good to have a lot of help. Also, the breadth of professional interest increases the likelihood that there will be public understanding and support for the schools' efforts to reduce problems of poor achievement. On the other side, though, if there is pulling and tugging among specialists for access to children and for authority, control, and credit, everyone is the loser. Under those circumstances funds and professional time get dissipated in smoothing out rivalries and are diverted from their primary target, namely, the pupils.

Instructional problems should be the primary concern in team deliberations.

Regular class teachers, in either circumstance, serve their pupils best by being open to suggestions and willing to accept help, but remaining in charge, in the professional sense. There are some schools and communities so poor in resources that teachers have little choice but to go it on their own. More often, though, there are choices teachers may make as to which specialists they will use as consultants and whose advice or direction will be taken.

In one community, all of the following specialists were already involved or were attempting to involve themselves in work with the school system and its teachers regarding pupils with learning disabilities:

Audiologists
Neurologists
Occupational therapists
Optometrists
Pediatricians
Physical therapists
Psychiatrists
Psychologists
Social workers
Speech clinicians

In addition to those persons who are external to the school system, the following specialists were already in its employ:

Counselors
Physical educators
Psychologists
Remedial teachers
Social workers
Special educators
Speech therapists

Not only are there many specialists, but there are often conflicting ideas about what needs to be done. The physical educators may offer a course of psychomotor movement education linked to learning spelling or number facts. The speech therapists may put forward a program of language development based on a semantics theory. The physical therapist and neurologist may wish to see a neuromuscular reeducation plan initiated. The psychologist, psychiatrist, and social worker may opt for a behavior modification or a psychodynamic design for remediation. The optometrist may urge that hope be pinned on eye movement exercises coupled with visual motor perceptual training. And so on, all vying for the pupil's in-school or out-of-school time.

The school principal must set clear policies on interprofessional communications and responsibilities.

Such well intentioned but differing kinds of approaches bombard the regular class teacher and the parents of pupils who show signs of learning disabilities. The specialists may all have some degree of well deserved credibility, too.

What is needed is an instructional policy to which teachers can repair. That is the key to appropriate decisions about teamwork with other specialists. When the roles and functions of specialists can be aligned with guidance from established instructional policy, the interactions of regular class teachers with specialists can be much more productive.

Each school system (or local school, if there is decentralized authority) should consciously choose the route it expects to take in work with learning disabled pupils. It might be one or a combination of approaches, so long as it is clearly stated and is made a matter of policy. Regular class teachers ought to have major input in connection with policy formation, so that it is consistent with their own professional views.

Conscious decisions are made.

As an example, one of the most perplexing professional interactions teachers face is with physicians who prescribe medications that need to be taken during the school day. The administration of medication is plainly outside the usual range of duties of a teacher. Yet conditions may arise under which teachers need to react to requests to do so. Grotsky, Sabatino, and Ohrtman (1976) offered the following careful policy oriented procedure for consideration by regular and special teachers in that circumstance.

> Drugs have a definite but limited role in the treatment of students' learning and behavior problems. Drugs can be useful with *some* under *certain* circumstances. . . .
>
> The procedure under which you may administer medication varies by school district. Check to see if there are established policies for your district. Adhere to these policies, if for no other reason than your legal protection. The following guidelines will aid school systems in dealing with this situation:
>
> a) Written orders are to be provided to the school from a physician, detailing the name of the drug, dosage, and the time interval in which the medication is to be taken. These orders are to be reviewed periodically.
> b) A written request is to be received by the school district from the parent or guardian of the pupil, together with a letter from the physician indicating the necessity for the administering of the medication during the day, the type of disease or illness involved, the benefits of the medication, the side effects, and an emergency number where he can be reached. Both letters should be placed in the pupil's file.
> c) Medication must be brought to the school in a container appropriately labeled by the pharmacy or physician.
> d) The initial dose at school must be administered by the school nurse. If a teacher is to give subsequent medication, the nurse should discuss the medication, including its side effects, with the teacher.
> e) The school nurse shall prepare a written statement to the building administrator as to the side effects of the drug, if any, and a copy should be placed in the pupil's file.
> f) A locked cabinet must be provided for the storage of the medication. Opportunities should be provided for communication with the pupil, parent, and physician regarding the efficacy of the medication administered during school hours.

Clear policy promotes effective practices.

> g) With the parent's and physician's consent, medication of a short-term duration may be administered by a teacher.
> h) The school district retains the discretion to reject requests for administration of medicine.
>
> You will need some information in order to effectively understand and teach a child who is on medication. With written parental permission and through your school nurse, obtain the following information from the child's physician:
>
> a) How does the medication work?
> b) What change in the student's behavior can be expected?
> c) What effect will the medication have on the child's attention span, memory, motor dexterity, personality, sleeping and eating habits?
> d) Does the medication have undesirable side effects?
> e) What behavioral and/or motoric reactions indicate that the dosage may be toxic or inadequate for the child's needs?
> f) How long will the child have to take the medication?
> g) Could the child become physically and/or psychologically addicted to the medication?
>
> The most important aspect of chemotherapy is to understand that the use of drugs does not relieve the physician, parent, and teacher of the responsibility for seeking to identify and eliminate the factor(s) causing or aggravating the problem. (pp. 8–10)

With policy positions such as this one as backdrops, and with the regular class teacher's position a central one with respect to specific instructional decisions about individual children, it becomes possible to sort out and make full use of the special competencies of others. That, in the end, is what is most satisfying to the specialists, too.

Special Education in the Regular Grades

Out-of-class instruction poses difficulties.

The pattern for remedial instruction in most of the nation's schools has been to schedule pupils out of their regular classes to individual and small group sessions with the remedial specialist from daily to once a week. The intensity depended on the case load of the remedial teacher and the needs of the pupil. The time out of class was planned to interfere as little as possible with activities from which the pupil could profit. That intention missed, however, as often as it hit because of schedule complexities.

Similarly, children with learning disabilities have usually been scheduled for part time instruction outside the regular class. An area of the school was made the headquarters for one or more specialist teachers. Selected pupils came to learning disability resource rooms for instruction and help with regular class assignments. Visits to that resource room or clinical center were on schedules worked out among the regular teachers, the specialists, the pupil, and often the principal. They, too, attempted to coordinate so the pupils would miss as little as possible of regular class instruction in which they might take part successfully.

Blending Regular and Special Education into Individualized Instruction

Individualization of instruction calls for the orchestrated interplay of four ingredients. The correct mix varies somewhat for each child, and each child's own proportions must change from time to time. The four ingredients are as follows:

- *Developmental instruction: This involves teaching that is consistent with and stimulating to the child's current rate of cognitive, affective, and motoric growth; it is fundamentally relevant for all children.*
- *Adaptive instruction: This involves selecting curriculum and materials and methods that build upon and expand the child's cultural and socioeconomic background; it is especially relevant for bilingual, migrant, inner city, and other children with limited backgrounds, including many children from middle and upper socioeconomic levels.*
- *Substitutive instruction: Collectively, this includes instances that call, for example, for employing touch and hearing rather than sight, wheelchairs rather than legs, sight rather than hearing, listening rather than reading, and other alternatives to usual practices.*
- *Remedial instruction: Examples of such instruction are corrective speech, mathematics or reading, and tutoring or group work to establish skills or content knowledge and understanding to make up for missed education or faulty initial teaching.*

Using this conceptual scheme, the complexity of any educational problem for the teacher is a function of how much of each of those four ingredients must be included in a child's program. (Birch, 1982)

Individualization of Instruction

It is not necessary, of course, that individualized instruction be one regular class teacher with one pupil. It can also be one specialist or one peer or cross-age tutor with one pupil. As stated earlier, the same instruction may well be exactly what is needed by several pupils. Much individualization, too, can be accomplished by programmed and other self instructive materials, with selective monitoring by the teacher or by an aide. Thus, while one-to-one instruction has a higher yield, a high degree of personalization for pupils with learning disabilities is feasible witnout the constant one-to-one regular teacher-pupil image too often incorrectly associated with the concept (Jenkins & Mayhall, 1976).

Individualization does not necessarily mean one-on-one teaching.

Curriculum Individualization

Teaching a child who shows learning disabilities necessitates starting with something the child can learn. It is advisable to make sure that the match is a tight one between the child and the material or skill to be learned. That kind of close match is more likely if what is to be learned has high interest value, is presented in small, interlocked steps, and is accompanied by reinforcers with high appeal to the pupil. To make such adaptations in what is to be taught it is sometimes necessary to broaden the curriculum or even depart substantially from it. If the history of American colonial times holds higher appeal than the prescribed curriculum on contemporary America, and if high quality, individualizable instructional materials are available for the former, it may well be that much more progress can be made with the child with learning disabilities by temporarily moving away from what is *supposed* to be taught. The same principle holds for all other components of the usual curriculum. This does not mean, of course, that anything goes. Rather, it means one should exercise professional judgment to help bring into the pupil's orbit curricular content and skill that offer the best chance for successful instruction and learning.

The curriculum may need to be changed.

The nature of the content or skill selected to be taught should promise to contribute, also, to improving the child's attention and study behavior. Teachers in high schools and elementary schools need freedom to seek out and use elements from any part of the entire school curriculum in working with children with learning disabilities. That should be viewed as one of the most important steps on the road to satisfactory accomplishment in the rest of the curriculum.

Methods of Teaching

Haring (1975) commented, "Teaching a learning disabled child necessitates finding a method of instruction which allows the child to learn" (p. 198). He went on to emphasize Becker's (1972) position on the teacher's obligation to find a way to teach each child.

> The idea of the teacher as responsible for the learning of his or her students is gaining momentum as persons applying behavior principles in education show that retarded children can learn to read, disadvantaged children can learn language concepts and reading if they are taught properly, and learning disabilities disappear when more effective beginning reading programs are used. (pp. 198–199)

Observation of regular class teachers who succeed with children despite their problems shows that they have three things in common with respect to their methods of teaching:

Detailed planning states alternatives.

1. They make and use plans. The plans are not superficial; they are detailed and specific, with alternatives stated in case the first course of action does not work.
2. They work out objectives (with the child, if possible). The objectives are plainly and factually stated in operational terms. It is easy for both pupil and teacher to know when an objective has been reached.
3. They monitor the child's progress regularly and keep records on it. The records are open to the child but, more important from the standpoint of

teaching methods, successful teachers use the data about the child's progress to measure the effectiveness of their teaching and make changes when progress slows or halts.

Instructional Materials

For regular class teachers in search of the precise material to match a child's particular needs, four points may be particularly helpful.

1. First try whatever is at hand, the usual instructional material employed with other pupils. If adaptation seems to be needed, the special education teachers in the building may be able to suggest how to do that.
2. Special education teachers are often quite knowledgeable about instructional materials. The specialist teachers in the local school system may have or know about just the right thing.
3. Many materials are linked to particular points of view about learning disabilities. Check to see if the items are or can be adapted to the approach that will govern how the child is taught.
4. There should be a special education instructional materials center nearby. Such centers are located regionally. They have samples of materials, many of which have been tried by teachers whose notes can be reviewed. The staff is expert at advising and demonstrating, and materials may be borrowed and used at no cost.

Teachers can usually examine a wide range of instructional materials in regional or citywide materials centers.

Sometimes, particularly when working on matters such as social behavior and attendance to the learning task, charts and other recording devices become instructional materials of first order magnitude. When these are pupil made and pupil maintained, they can be personalized and become the property of the child when completed.

Summary

What Every School with Learning Disabled Pupils Should Have

The following list outlines the characteristics of a school in which the problems of learning disabilities are taken very seriously and individualized programs are provided. The details will vary from school to school, but the general features are consistent.

1. Preschool age children in the community are screened at least by age 3. Children who show problems in language development are studied in detail. School programs which offer intensive language experiences are offered. No children are labeled as "learning disabled" in connection with preschool programs, but differences among students are noted. Those considered "at risk" for school failure are given intensive help.

2. Special educators work closely with regular teachers in primary grades to identify children who are not responding in positive ways to the school program and to develop alternative, highly structured programs for such children. The necessary alternative programs are conducted in the mainstream classrooms under the management of the regular teacher, but with consultation and support by special educators and aides.

A unified system to address individual needs is stressed.

3. The school has one unified system for support of mainstream classes and teachers in serving children who have special needs. All exceptional children who become the object of special studies in the school, including those who show learning disabilities, are served through this system. The school principal assures that the total system is clearly understood by all concerned and that roles of all specialists are well defined.
4. Every effort is made in the school to provide special education to students who have learning problems while they remain in regular classes. The position of the regular teacher is enhanced as general manager of the system.
5. To the extent that resource rooms, special classes, or learning centers are used, they are one unified system used only to the minimum extent necessary. Students participating in these special programs are not labeled, except for "reporting purposes only" as may be required by governmental agencies.
6. Training programs for teachers and other educators in the building are provided as a basis for continuing improvement in the teaching of basic skills.
7. All teachers, including those in special subject areas and even at advanced levels, are expected to take account of the individual abilities of students in basic skills; also, all teachers are expected to teach in ways which enhance the basic skills of students.
8. A comprehensive program of parent involvement is in operation in the school. Parents of children who are having learning problems are involved very intensively in planning and monitoring of programs for their children.
9. The school offers individualized programs for all students. Those who have exceptional needs are the objects of especially intensive diagnosis and instruction, but that is only a logical part of a total school operation which attempts to adapt to individual needs.
10. The school has a well stocked library and a sufficient supply of all other kinds of instructional materials to support individualized programs for all students. The instructional materials are managed by a well-trained professional. Use is made of districtwide and regional instructional materials centers as necessary.

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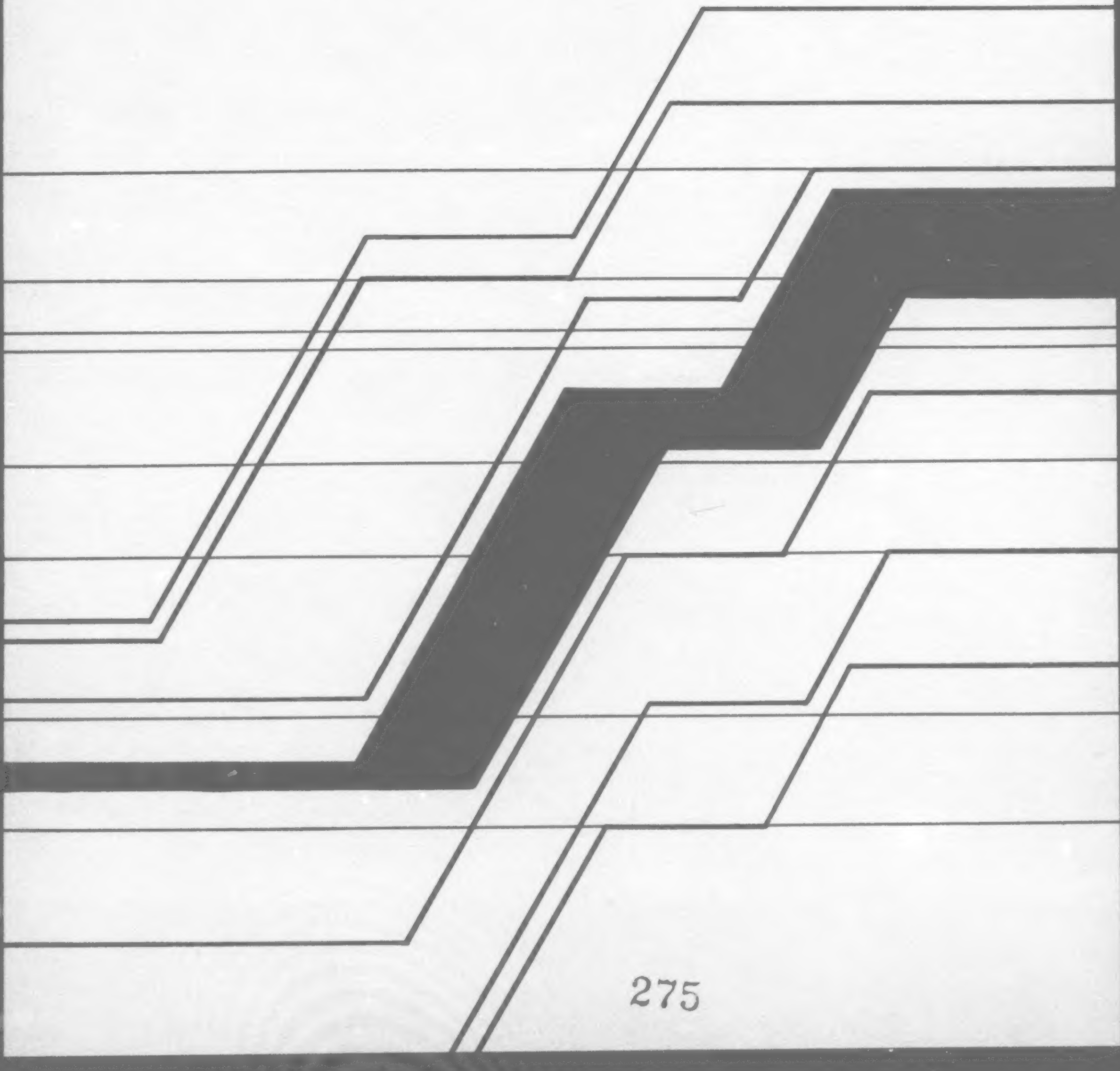
CHAPTER 8

Emotional Disturbance



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Topical Bibliography

The Challenge to Educators

Anyone who has been a teacher or who has talked with teachers about disturbed or disturbing children cannot doubt their reality. These remarks recorded by Bower (1973) from discussions with teachers are illustrative. One said:

> I was in trouble all year long, with my kids. A girl pulled a razor blade out in class and tried to slit her wrists. A boy called me on the phone and said he was going to shoot himself that night. These things shake you up. I come from a straight middle class background and I don't really know how or what to feel about kids absolutely so strung out on dope that they can't see straight. I try to teach them and to like them but I find it hard to do either. (p. 9)

Another teacher found and appreciated help. "There's a fantastic young guy running the cooling-off room in our school. It's really beautiful. It's more for kids who are really up during the day or upset or need to get out of their own rooms" (p. 19).

Teachers' experiences are compelling and varied.

A third teacher's perspective was still different:

> I went to visit a home of a very disturbed child. The mother was anxious to show me that he could do something really well. I was standing on the porch talking with the father and she pushed the kid out the screen door saying, "Go on, go on, show the teacher." And she stood behind the door with this big ruler in her hand. The poor little kid just stood there with tears rolling down his face. I said, "What is it, Kenny?" He said, "She wants me to say the time tables, and I can't." So I tried to explain to the mother that we don't teach the time tables in the first grade. (p. 22)

Background

Whether young people like these are thought of as delinquents, attention-seekers, victims of adult mismanagement, psychopathic, biogenetically unbalanced, or sick, they are present in some proportion in every school. Since the first efforts to alter the behavior of such youngsters in positive directions through public education began, the success rate has been discouragingly low. Nevertheless, determined educators like Farrell (1923), Nudd (1928), Wallin (1938), Stullken (1950), Redl (1959), Haring and Phillips (1962), Pate (1963), Bettelheim (1967), Bower (1974), Morse (1976), and Kaufmann (1977) have kept alive an unbroken line of effort to create educational procedures that would identify and correct such conditions.

There can be little doubt that discipline is at the top of today's problem list for teachers and parents. Certainly that concern is related to the presence of disturbed and disturbing children in the nation's schools and homes, children who challenge both the resources and the authority of education and the community. The following statement, made by the National Education Association in 1928 (Nudd, 1928), seems equally accurate today:

Disturbed children are puzzles in search of solutions.

> Every teacher, every social worker, and many a parent is familiar with the problem child—the boy or girl whose school progress or whose reactions to normal

> requirements point toward later inefficiency, delinquency, or some other failure in personal or social adjustment.
>
> What is the trouble with such children, and what can be done for them? How can the school obtain and utilize a knowledge of the forces that are affecting their success, and give them in fullest measure the benefits of their educational experience? Puzzles or pests at home, in school, or elsewhere, their personal welfare and the welfare of society require painstaking effort on their behalf. They cannot wisely be regarded as temporary nuisances, whose present weaknesses a kindly fate will in some way heal with the balm of time, nor can they wisely be ignored without serious study and effort, as inevitable liabilities which society must expect along with its blessings. Tomorrow they will be citizens, for weal or for woe, and their shortcomings today, if left uncorrected, may have dire effects upon the character of their citizenship tomorrow. They present the most baffling, the most urgent, and the most interesting problems in the field of education. (p. 3)

The challenge to schools continues unabated.

The Meaning of Emotional Disturbance

Everyone faces stressful events that can strain the normal resiliency of good mental health. The emotional pulling and tugging associated with disappointment, danger, love, grief, injury, victory, and insult is part of daily life. It is one of the responsibilities of education to help pupils to acquire the ability to cope successfully with the ups and downs of life. *Mens sana in corpore sano* is accepted as a major goal of liberal education. Thus, teachers and principals start from the baseline assumption that the maintenance of good health, physical and mental, is an important matter for all children under their supervision.

"Emotional disturbance" has several different usages and nuances of meaning.

The psychoeducational approaches presented in this chapter are not separate in nature from the approaches that able teachers and principals apply to all children. If they differ, it is a matter of degree and emphasis more than anything else.

Emotional disturbance has come to mean abnormal, deviant, or atypical behavior that seems to be related to unnatural suppression or exhibition of fear, hate, sorrow, joy, or other affective states. It often carries the implication that a person is somehow overly subject to or affected by emotion in personally or socially undesirable ways, or that the individual is governed by emotion (affect) rather than by reason (cognition).

To some, emotional disturbance covers the gamut of children's psychological problems, leaving the term *mental illness* for similar conditions in adults. Others limit emotional disturbance to the mild and moderate disorders, while for still others it includes all types and degrees of psychiatric conditions. Another point of view says that emotional disturbance includes a well defined group of mental illnesses. But from yet another perspective, emotional disturbance is not necessarily at all related to mental illness.[1] Teachers and principals will encounter all of these ways of using the term. Each is legitimate.

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[1] A valuable analysis of the history of the term *emotional disturbance* and related terms (i.e., behavior disorders, mental health, educational therapy) is furnished by Kaufmann (1979).

We will recommend an educationally oriented way of thinking about emotional disturbance, a way that ties closely to the daily work of teachers and principals. It seems advisable to begin, however, with some highly relevant antecedent material.

Psychiatry and Education

Emotional problems have generally been considered the domain of psychiatry. The expression *emotionally disturbed* entered the professional literature about 1900 (Reinert, 1972). But educators took a share of responsibility early, too. During the 1920's and 1930's some schools, especially those in large cities, began to make special provisions for children characterized by emotional disturbances. Yet it was not clear which children were included in this group. The phrase "emotionally disturbed" remained ill defined. Kanner (1962) complained:

Schools assumed early responsibility.

> It is impossible to find anywhere a definition of the term "emotionally disturbed children," which had somehow crept into the literature some thirty years ago and has since then been used widely, sometimes as a generality with no terminologic boundaries whatever and sometimes with reference to certain psychotic and near psychotic conditions. (p. 101)

Definitions

As though in answer to Kanner, Bower and his associates produced a definition that is at the heart of the education of emotionally disturbed school children today (Bower, 1961). As such, it influences the great majority of educational decisions concerning such children because it was the prototype for the definition adopted in Public Law 94–142, the Education for All Handicapped Children Act of 1975.

Seriously emotionally disturbed is defined in P.L. 94–142 as follows:

> The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: (a) an inability to learn which cannot be explained by intellectual, sensory or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes children who are schizophrenic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed. (*U.S. Federal Register, 42,* August 23, 1977, pp. 42478–42479)

Definitions influence educational decisions.

Until January 16, 1981, children described as autistic were also included in this definition. They are now considered, for purposes of Public Law 94–142, to be classed with children in the "other health impaired" category (*U.S. Federal Register,* 1981). Olley (1981) commented that "parents and professionals associated with autism have worked for years to change the view that . . . the learning problems of autistic children are caused by emotional problems" (p. 1). He went on to state that "when planning for educational services, the most logical allies of autistic children would seem to be those who serve the severely handicapped" (p. 31).[2]

An objective perspective on the meaning of the Public Law 94–142 definition is offered by this kind of statement, that puts more emphasis on the child's teachability:

> Children with behavior disorders are those who chronically and markedly respond to their environment in socially unacceptable and/or personally unsatisfying ways *but who can be taught more socially acceptable and personally gratifying behavior* (italics added). (Kaufmann, 1977, p. 23)

Differences do not necessarily imply deficits.

Algozzine (1979) and Algozzine, Schmid and Mercer (1981) make much the same point. Senf (1981, p. 115) carried the *teachability* concept even further by urging the "dehandicapping" of children by recognizing "the existence of individual differences not as deficits but as legitimate features of children."

Emotional problems that interfere with learning demand attention.

The heavy emphasis on the word "serious" as a modifier in contemporary definitions may help to distinguish between normal, temporary, transient, situation-related mood changes in children and the more lasting and pervasive emotional states that have detrimental effects on all life processes. If so, that can be of some help to teachers, principals, and parents. But any emotional problems, however transitory, that interfere with learning are "serious," so far as educators are concerned. It is not enough to limit special education and related services only to pupils who meet medical/psychological standards of emotional disturbance. That may be administratively convenient, but it is educationally unjustifiable. It is preferable that states and local school districts give more credence to the professional opinions of those responsible for instruction. *Emotionally disturbed* may be an expression that is difficult to define in an educationally meaningful way, but teachers and principals have no difficulty in recognizing it when it affects the day to day work of their pupils.

Teachers' Views

Time after time teachers have told us that so far as appearance, behavior, and teaching-learning interactions were concerned, very few children labeled emotionally disturbed could be distinguished from other children labeled learning disabled, educable mentally handicapped, or minimally brain damaged. They say, also, that they work with all these children in much the same way. We are far from the first to make that observation (see Hallahan & Kaufmann, 1977; Hewett & Forness, 1974).

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[2] Educational needs and characteristics of children classed as autistic are addressed later in this chapter and in Chapter 13.

It is true that most of the time children who are, for instance, schizophrenic, can be readily differentiated from other children called emotionally disturbed, as well as from those called educable mentally handicapped, minimally brain injured, or learning disabled. But there are other youngsters from whom schizophrenic pupils cannot, for educational purposes, be easily separated. These include many persons labeled severely and profoundly mentally retarded, and many multiply handicapped deaf or blind or cerebral palsied individuals. This observation has also been made elsewhere and earlier (Lovaas, 1973; Wing, 1976).

You can't tell the child by the label.

A persistent and interlocking group of themes emerges from this brief examination of meanings and interpretations.

- Labels like "emotionally disturbed" are only distantly related to educational needs.
- Diagnosis in medico-psychological terminology tells little if anything about how and what to teach.
- Children in dissimilar sounding categories may frequently profit from similar educational approaches.
- The "cause" of the labeled condition is seldom the "cause" of the educational condition of the child.
- "Emotional disturbance" is too often a catch-all expression for a complex, broad, and extremely varied assortment of educational, social, and personal problems.

It is conclusions like these that have helped fuel the widespread movement toward generic preparation for all teachers to work with exceptional children and youth.

What is important for teachers and principals is the fact that disturbed or disturbing children *usually* are both poor academic achievers and out of step socially and personally. In other words, the child who is associated with disruptive, withdrawn, and immature actions is *usually* also having difficulty mastering language arts, mathematics, and academic content subjects. This situation gives rise to several questions. Does one condition cause the other? Are the two independent? Are they interactive? Where does one start in trying to remedy the situation? Does it matter?

Which came first, the chicken or the egg?

Actually, that proves not to be a dilemma. Indeed, the two conditions are found to be interactive. It was proposed as early as the 1920's that social and personal behavior, on the one side, and a weak academic record, on the other, were best attacked together.

> Bad school conditions, ranging from unsanitary and unwholesome physical conditions in the school plant, to the curriculum itself, operate in case after case to produce restlessness, discontent, irritation, insubordination, truancy, and all the youthful misdemeanors so often attendant thereon. . . . A child's behavior, whether it be good, bad, or insufferable, is the product, the inevitable end-result, of two things: (1) the native endowment of the individual, the sort of psycho-physical organism with which he made his entry into our world, plus (2) the experiences which life has given him." (Woods, 1923, pp. 28–29)

This early special education insight about interactivity forms part of the backdrop for contemporary sociopsychological conceptualizations (Kaufmann, 1979) and ecological theories (Apter, 1978) about exceptionality, to be mentioned later. That insight, too, has led almost inevitably to efforts to redesign schooling in the early childhood years for two purposes. First, the objective is to make it possible to locate, very early in life, those children who might be at "high risk" with respect to possible emotional disturbance and learning and behavior problems. Second, and simultaneously, the objective is to individualize instruction from day one in order to minimize or eliminate any high-risk condition. These efforts, along with the application of effective methods of working with the disturbed and disturbing young people now present in schools and communities, define a broad scope of challenge to teachers, principals, and all their professional associates.

Early identification is a major goal.

The Person Who Is Emotionally Disturbed

The stunting of physical, intellectual, and emotional growth is evident in this true story about Tricia.[3] Equally clear, however, is the liberating strength of excellent special education working in tandem with other important professions. Several of the themes stated in this brief tale are expanded upon later in the chapter.

☐Chronologically, she was 16—born in 1962. Physically she was 10—standing a little more than 4½ feet high—and intellectually her tests showed her to range between the ages of 11 and 13.

In clinical terms, Tricia was a victim of "psychological deprivation with delayed puberty coming from a dysfunctional family and having emotional, social, and behavioral problems."

Tricia responded by "failure to thrive."

In more common terms Tricia was never really loved by her parents—a factor which stopped her from growing normally and eventually led her to obnoxious, antisocial behaviors which kept her virtually friendless.

At home her father and stepmother distrusted her completely, called her a liar and thief, and kept her confined to her room where she was required to read long passages of religious philosophy and told to memorize them. At times she was physically abused by both parents and an older sister.

Removed from her home through the help of social service agencies who learned of her plight, and supported by officials of the school she attended, Tricia went through several foster homes before her social behavior led her to a juvenile detention facility. Eventually, she was recommended to the Home for Crippled Children's (HCC) rehabilitation center where she was admitted under the supervision of Learning Disabilities Coordination . . . .

Tricia was enrolled in a program at HCC which would develop "age-appropriate" adaptive skills for group living or a host home and help her develop adequate social skills. She would hope to complete her education in the mainstream.

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[3] Adapted from *The Turning Point,* 1980.

Tricia came to the HCC with a fear of recreational activity. She was extremely afraid of water, [and] had never been to a movie, ball game, amusement park or any other social event. To survive in what she felt was a hostile peer world, she had learned to use excessive flattery and tell adult jokes. She tried to socialize with adult staff workers, ignoring any dealings with people her own age.

Over a period of ten months, the HCC's rehabilitation team went to work. Teachers in her special education classes worked with her, as did members of the Home's Residential Living staff, to involve her with her own age groups, to eliminate her more obnoxious activities, and to develop positive social skills. HCC's Dietary Department taught Tricia proper nutritional habits, and representatives of the Social Service and Psychology Departments helped her adjust her behavior patterns.

Adaptive behavior skills were fostered.

Before the year was over, Tricia gained friends her own age, felt comfortable in the swimming pool, and began dropping her more annoying habits. She also grew 5 inches! Last Thanksgiving she returned to her community where she lives in a foster home and is enrolled in a public school. (Adapted from *The Turning Point,* 1980, pp. 1–2) □

Years of deprivation were recovered in months.

Tricia's case certainly may seem extraordinary, even among the special group called emotionally disturbed. But in her own extreme way, Tricia illustrates several very important ideas about these troubled children and about exceptional children in general. (Some of these ideas may be familiar themes, by now, from other chapters.)

- Children called emotionally disturbed are often unpleasant, abrasive, and manipulative. It is not always easy to remain objective about them and to try to help them, much less to like them. (Other exceptional children can be like that, too.)
- Children considered to be disturbed frequently distort reality, twisting everyday situations to their own ends. Such behavior, while often self-protective, can be repulsive because it seems to lack conscience and to be disrespectful of laws and of the rights of others. (Sometimes other exceptional children behave this way, too.)
- "Failure to thrive," in both a physical and an intellectual sense, can be a significant accompaniment to severe emotional deprivation or inversion (i.e., hated rather than loved). This can happen to any child during the developmental years, given sufficient anti-stimulation.
- A concentrated, full-time, team-planned and team-implemented re-education procedure can sometimes produce an amazingly swift turnaround. Such an effort may require short-term removal to a special programming facility quite distant from education's mainstream. (The same is needed for certain other exceptional children, too, though the nature of the setting may differ.)

- As a result of the assessment that brought her under the auspices of special education, Tricia could have been labeled "seriously emotionally disturbed," if her behavior was judged against the criteria in the P.L. 94–142 definition. Yet, a different team of psychoeducational diagnosticians might very well have looked at her slowed cognitive development and her obviously maladaptive social behavior and considered them a sound basis for making her primary diagnostic category "mental retardation." And still a third team of assessment specialists might, with equal justification, have considered Tricia's anomalous physical development a primary diagnosis, making "physically and health impaired" the appropriate category that entitled her to "special education and related services." While different categorizations might have altered, somewhat, the initial emphasis in Tricia's individualized education program, the overall remediation procedure would have been fundamentally, and in most details, the same.

Changing the label does not change educational needs.

The story of Tricia certainly illustrates more than these five points. Much could be said, for example, about the determined persistence of concerned people—teachers and others in Tricia's community—who were not deterred by early failures. We could also consider what would be needed to keep alive Tricia's momentum toward normalization. But it is necessary now to turn to a consideration of contemporary terminology and conceptions that are helpful to teachers and principals as they deal in broader ways with their growing responsibilities for educating exceptional children.

Terminology and Conceptualizations of Emotional Disturbance

Knowledge of health professions terminology facilitates communication.

This section first introduces and briefly describes certain major forms of mental illness. It does so from what Newcomer (1980) calls the *disability perspective,* reflecting a health professions point of view. The chief purpose is to clarify terminology that most physicians and nurses, many psychologists and social workers, and a number of special educators prefer to use when speaking or writing about emotional disturbances. It is obviously necessary for teachers

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Current estimates identify 50,000 chronically mentally ill *children and youth in the United States. They are defined as persons under the age of 18 "with a severe, chronic disability which . . . represents an emotional and/or organic impairment that continues more than one year, . . . results in substantial functional limitations of major life activities, . . . and reflects the person's need for special interdisciplinary or generic care, treatment, or other services which are of extended duration and are individually planned and coordinated" (Lurie & Ramage, 1980, p. 6).*

Estimates of how many school age children need some special education/mental health service range from 2% to 10%. The 2% prevalence figure used by the U.S. Department of Education and most states is conservative, and may well encompass only those cases that are truly "serious."

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and principals to be able to communicate with other professionals and with parents in this widely prevalent vocabulary, even though the underlying concepts and classifications may have little direct educational relevance.

The second part of this section introduces a biological concept of mental illness. The concept itself has a long history, but recently it has moved beyond theory into promising practical applications. Third, Quay's (1975) empirically based groups of maladjustment characteristics are described. These are considered in terms of their high level of present helpfulness in psychoeducational assessment and in planning for and guiding instruction.

Diagnostic Terminology for Mental Illnesses and Disorders[4]

Mental diseases and disorders are grouped, from the point of view of the health professions, into the five general categories of psychoses, neuroses, psychopathic or sociopathic conditions, transient situational disorders, and behavioral and independent disorders. These groupings are used with both adults and children, and each may have several subcategories. Those more commonly associated with young people are described below.

Psychoses

Psychoses denote severe impairment of thinking, remembering, language, understanding, and other mental functions, to the degree that an individual is without the ability to handle ordinary life activities responsibly. The impairment may include hallucinations, delusions, distortions, marked shifts in mood, and inability to recognize or understand the immediate environment—all without apparent reason, and all beyond the individual's control. Several of the main psychotic conditions that appear in young people follow.

Lack of contact with reality is a major feature of psychosis.

Schizophrenia is a group of four illnesses having in common serious derangements of thinking, mood, and behavior. *Simple schizophrenia* consists of apathy, indifference, loss of mental functions, and limited or no motivation for personal attachments and concerns. *Hebephrenic schizophrenia* is highlighted by silliness, marked disorganization in behavior, and complaints based on imaginary illnesses (hypochondria). *Catatonic schizophrenia*'s special characteristic is stupor, with mutism and stiffened, but manipulable body parts. Another catatonic type shows excessive motor activity. *Paranoid schizophrenia* is distinguished by feelings of persecution or by false beliefs about personal greatness (delusions of grandeur), and by seeing or hearing things not really present (hallucinations). Schizophrenia in childhood is mainly a very withdrawn form, sometimes called *autistic;* life is viewed almost solely in terms of one's own needs and desires, through all-absorbing daydreams and fantasies, unmindful and out of contact with objective reality. Simple schizophrenia is most common in adolescence, though the other forms occasionally appear.

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[4] This terminology reflects prevailing practice in psychiatry at the time of writing. Some key changes from the current to the new terminology are noted, beginning on p. 270. It cannot be determined now whether the proposed new terms and usages will be quickly and widely adopted.

Manic-depressive psychosis is manifested in major, unexplained, and often sudden shifts of mood. Mood swings range from wild unrealistic excitement and delusions of grandeur to the depths of apathetic unconcern with life. Types include manic only, depressive only, or cyclic. Among children there are occasional evidences of manic-depressive psychosis. However, the occasional uncontrolled, high excitement of children in play or after adult stimulation (e.g., tickling), should not be confused with the sustained, unreasoned quality of a manic state. Despite the growing literature on childhood depression, this condition is still not well understood.

Neuroses

Neuroses interferes significantly with daily living.

A central feature of the group of psychiatric illnesses called *neuroses* is a state of anxiety severe and prolonged enough to interfere seriously with daily life activities. Types of neuroses are classified mainly by how the anxiety is experienced, expressed, or kept under control. Children experience all seven of the types noted below.

Anxiety neurosis is so named because the anxiety is experienced directly and is often observable by others. Excessive tension and fear may be accompanied by sweating, heart palpitation, and other real symptoms. It is debilitating and distracting, but without evident reason or out of proportion to apparent situational realities.

Depressive neurosis is present when an individual, no matter how successful in actuality, feels worthless and unable to confront the world to the degree that day to day independent living is jeopardized. Persons who suffer from *hypochondriasis* believe they have a variety of illnesses, though they are actually healthy. Preoccupation with disease and body functions is a relatively controlled way to express anxiety. *Hysterical neurosis* is identified by involuntary loss of a body function without physical cause, usually suddenly and in an emotionally charged context. No anxiety or fear is felt, but the individual experiences inability to move a hand, to walk, to see, or to hear.

Neurasthenia is a dragged out, overwhelmingly tired feeling that prevents everyday activities like dressing, working, or going to school. *Obsessive-compulsive neurosis* is ritualistic performance of hand-washing, rocking, reciting phrases or words, singing or other activities in persistent and recurring fashion, and not being able to give them up without constantly feeling upset, irritated, and sometimes angry.

Phobic neurosis is a high degree of and persistent fear of a thing, place, or condition that the person consciously knows really poses no danger. It is expressed in a variety of forms and types, from acrophobia (fear of heights) to xenophobia (fear of foreigners or strangers). Claustrophobia (fear of closed spaces) is perhaps the best known. Most common in children are two that are hard to distinguish: school phobia and separation (from parents and family) phobia.

Neuroses, without question, can be very complex pathological conditions, from a medico-psychological point of view. They can seriously disrupt daily life and sharply limit personal, social, and vocational development. Anxiety, however it manifests itself, can limit concentration and impair a child's ability to function in school. Interaction with peers can be disrupted or rendered developmentally counterproductive when a child is too preoccupied or upset to engage well in typical play and other ordinary activities with agemates.

Sociopathic or Psychopathic Disabilities

The general category of sociopathic or psychopathic disabilities describes persons who are so self-centered that they ignore society's regulations, the rights or property of others, or love and affection from others whenever their own immediate pleasure is at stake. They exploit people and situations without feelings of guilt or compunction, have loyalty only to their own interests, and are without regard for long range consequences, even to themselves. They are often afoul of authority and frequently are residents in penal institutions.

Transitional Situational Disorders

This category includes major but temporary disorientations related to catastrophic happenings. Examples of such events are the sudden loss of parents through death or separation, or the loss of home, possessions, and familiar surroundings from a flood or volcanic eruption. Calamitous occurrences are sometimes so stressful that "the bottom drops out," and there may be a period of dazed, confused reaction, sometimes accompanied by severe depression. Over time, these disorders usually respond to warm, structured support and to substitution for actual losses.

Traumatic events have serious, though temporary, effects.

Behavioral and Independent Disorders

This terminology is employed chiefly, though not exclusively, in regard to children's conditions. Behavioral and independent disorders can cover a wide range of conditions, and agreement on the distinction between the two is not always present. Four types have been selected as illustrative examples. The first two are often classed as "independent," because they seem unrelated to each other or to a class of disorders. The second two are viewed as belonging to a group called behavioral, implying that they have some qualities in common.

A pupil who is a source of disturbing behavior is not necessarily "emotionally disturbed." Some youngsters simply have an uncommonly high nuisance value and need lots of consistent, firm, and constructive adult guidance.

Anorexia nervosa is habitual and long-term failure to ingest food, or ingestion followed by regurgitation, to the point that the child is emaciated, undernourished, and may die of starvation. It usually occurs in girls in the preteen and teen years, often going undetected because of clever dissembling about eating and the wearing of layers of bulky clothing. *Enuresis* is the involuntary voiding of urine after the normal age of control (about 3 years). It may occur at any time, but is most frequent at night. *Hyperactivity* (or hyperkinetic reaction) is excessive motor activity. Children appear to be almost always in motion, and movement is usually accompanied by distractibility, impulsiveness, and general emotional instability. *Runaway reaction* is deliberate and repeated leaving home, associated with uncommunicativeness or conflict with parents or other authority figures. The runaway is usually aimless, but may easily become involved in other untoward activities under pressure of need for shelter and food.

Emerging Psychiatric Terminology

Health professionals are moving toward use of modified categories.

An updated set of terms is now moving into use (American Psychiatric Association, 1979). The modified diagnostic categories, like earlier versions, have the weight of authority rather than empirical evidence behind them. The expressions of specific interest here that will be used by many health professionals to describe and classify children's conditions are listed below. They tend to be self-explanatory, once one has read this chapter, but more extensive descriptions are found in the *Diagnostic and Statistical Manual* (American Psychiatric Association, 1979).

Disorders Usually First Evident in Infancy, Childhood, or Adolescence:

Attention Deficit Disorder (with/without hyperactivity . . .)
Conduct Disorder (undersocialized aggressive/nonaggressive; socialized aggressive/nonaggressive . . .)
Anxiety Disorders (separation anxiety disorders; avoidant disorder; overanxious disorder)
Other Disorders (reactive attachment disorder of infancy; schizoid disorder; elective mutism; oppositional disorder; identity disorder)
Eating Disorders (anorexia nervosa and others)
Stereotyped Movement Disorders (includes Tourette's disorder; tics)
Other Disorders with Physical Manifestations (includes stuttering, enuresis, encopresis, and sleep disorders)
Pervasive Developmental Disorders (infantile autism; childhood onset pervasive developmental disorders; atypical)
Specific Developmental Disorders (developmental reading, arithmetic, language, articulation, mixed, and atypical)

Keep in mind that these terms are only shorthand descriptors for observed or assumed behavior. For example, "elective mutism" simply describes a person's obstinate and voluntary silence, though the person's physical speech mechanisms are in workable condition.

One of the dangers inherent in labeling "disorders" is reification, that is, to regard what is labeled as though it were a reality, not just a more or less convenient tag. All that these expressions actually mean is that a group of professionals have decided to use them for ease in communication, including recording, classifying, and other necessary activities.

Labeling a phenomenon does not mean that it is either real or understood.

As noted earlier, emotional disturbance may be viewed from a number of perspectives. The listing of terms just completed reflects mainly the conventional, health oriented stance which holds that specific diagnostic labeling is a basic first step, that diagnosis then determines choice of treatment, and that there is some underlying condition that, if corrected by the treatment, will reduce or eliminate the symptoms. Principals and teachers certainly need to be aware of that way of thinking and the terminology that accompanies it.

Help from Biological Science

Promising research accounts for a recent upsurge of interest in the possibility that biochemical imbalances may account for abnormal behavior. Educators are being asked to cooperate in studies that employ medications as either palliative or curative agents for emotional disturbances. Parents, too, have begun to ask about the potentialities of biochemical treatments.

Evidence grows that biological malfunctions are central to some mental illnesses. Various medications—and there are several—have effective records. They have been used mostly with adults, but some seem valuable also with children. It is now plain that "psychological escape from reality" is not, by itself, an acceptable explanation for why people become psychotic. Nor is "stress-induced anxiety" the sole reason for neuroses. Moreover, medication is no longer a last resort for only the most severe and intractable problems (Wender & Klein, 1981).

Some mental disorders now yield to medications.

It comes as no surprise to many psychologists and psychiatrists that *some* depression, *some* anxiety, *some* delusions and thought disorders, for instance, have biological origins and *sometimes* respond to pharmacologists' treatment. Occasional results are dramatic. A man who had been severely schizophrenic, mute, and out of touch with reality for 30 years, came to the ward nurse after a few weeks of a new medication and said, "I'm not sure where I am, but it looks something like a hospital. When can I go home?" (Wender & Klein, 1981). That is a rare case, but it can happen.

Beginning in the 1950's with such substances as chlorpromazine, a larger and larger group of chemical agents has been demonstrated to bring marked changes in selected cases of agoraphobia (panic attacks), vital depressions, and other conditions. These medications do more than relieve symptoms; they appear to adjust and normalize physiological malfunctions. Work so far suggests that they correct problems in the body's complex packages of chemicals called neurotransmitters. These mediate between the brain's myriad cells, which do not pass impulses directly by touch from one to another, but across a biochemical bridge of neurotransmitters. If the sensing, moving, feeling, thinking transmission between cells is faulty, the strange different behavior that suggests psychosis or neurosis may therefore have a biochemical explanation.

Leaders in the study of *neuropsychopharmacology* are psychologists, physicians, chemists, and others brought together by a common interest in understanding the anatomy, physiology, and motivation of human behavior. They do not advocate discarding psychotherapy. They are quick to say that in most cases where medications are successful it is also essential to employ counseling, reeducation, and the careful adjustment of psychoeducational support systems so that these resources are available to the individual whose life is undergoing constructive change.

Counseling and reeducation are important supports.

Leaders in psychiatry point out that medical schools are only beginning to teach the new knowledge about medications for mental illnesses (Wender & Klein, 1981). For that reason, they say that it is important to "explore the psychiatrist's theoretical background, therapeutic plan, and manner of conducting the treatment and evaluating the results." This "difficult task of questioning a physician about his or her approach to therapy" is a proper one for parents or guardians. Teachers and principals can alert parents to that task and, by working through them to share the school's concerns and plans with the physician, can build an alliance in support of the child.

Newcomer (1980) warned that "too-ready acceptance" by educators of a "biological cause" position can be harmful to children. It becomes easy, she argues, for the problem to be considered the child's and thus, because it is a "medical" problem, to be outside the school's domain. That leads, she feels, to the expectation that unless noneducators (neurologists, psychologists, psychiatrists) "cure" the child, there is little that principals and teachers can do but be sympathetic. Thus, special education may not be attempted. Further, full acceptance of the biological base model may suggest removal of emotionally disturbed children to special places such as hospitals or asylums for medical treatment—an approach which may have catastrophic effects on the child and family.

Help comes from more than one source.

The best outcome for the child is certainly not a three-way standoff of special education *vs.* medical *vs.* psychotherapeutic approaches. Rather, the maximum payoff for the foreseeable future ought to arise from an interactive matrix of all three, working together in regular classes and schools.

Empirically Derived Patterns of Aberrant Behavior

An analysis made by Quay has significant implications for how educators might deal with emotional disturbances in children and youth. Among alternative approaches, it probably has the greatest potential in the immediate future for a high return on professional investment for educators and others who work with emotionally disturbed young people.

For approximately two decades Quay (1964, 1972, 1975) has sought ways to understand emotional disturbance and behavior disorders that would be especially useful to educators. He collected data on how disturbed and disordered children (mostly boys) actually behave in relation to each other, in relation to social norms (school rules, laws against stealing), how they feel about themselves, their reactions to authority figures, and much more. His work seemed to excite other investigators, and their findings buttressed and extended his (Achenback, 1966; Brady, 1970; Patterson & Anderson, 1964). As a result there are now four well recognized patterns of childhood psychopathology. Equally important, the Quay groupings have much relevance for educators as a base for designing instruction in school and parental support strategies at home and in the community.

Quay's behavioral cluster patterns are based on research data.

The four patterns identified by Quay (1972) are:

- *Conduct disorder (aggression).* This is "the presence of a pattern involving aggressive behavior, both verbal and physical, associated with poor interpersonal relationships with both adults and peers" (p. 9). Overt behavior includes combinations of disobedience, disruptiveness, destructiveness, fighting, profanity, defiance, impulsiveness, irritability, lawlessness, and distrust of others.
- *Personality disorder (withdrawal).* Here are found "such traits as feelings of distress, fear, anxiety, physical complaints, and open and expressed unhappiness. It is within this pattern that the child who is clinically labeled as an anxiety neurotic or as phobic will be found" (p. 11). Other observed behavior includes seclusiveness, timidity, shyness, and hyperactivity.
- *Immaturity.* This cluster is less distinct. It is characterized by habitual actions that fall significantly behind those expected for the child's age. "Such behaviors are at variance with either the expectations of self, parents, or educational and other social institutions. . . ." (pp. 13–14). Behaviors often cited as characteristic of immaturity—preference for younger playmates, passivity, poor coping skills, short attention span, clumsiness—are much like those associated with mental retardation.

Immaturity may be similar to low level of adaptive behavior.

- *Socialized delinquency.* Quay calls special attention to this cluster by saying that it "represents behavior which is neither generally a source of personal distress nor clearly maladaptive when one considers social conditions under which it seems to arise" (p. 14). For example, in communities where gang activities constitute a way of life for adolescents, the socialized delinquent teenager is a "good citizen" of the gang subculture, cooperating with peers in planned robberies, in habitual truancy, and in showing close allegiance to a coterie of peers. All the while, though, the behaviors are at sharp variance with the majority's social and personal norms.

Technology and Special Procedures

Structured Learning for Disturbed Children

An example of an educational design that took off directly from the base built by Quay and similarly active investigators is the structured learning approach of Goldstein, Sprafkin, Gershaw, and Klein (1980). Noting that the Quay descriptions focus on the inappropriate things that each youngster does, they proposed a modified approach:

The goal is to augment prosocial behavior.

> From a skill-deficiency viewpoint it is also profitable to examine what each youngster does not do. Thus the aggressive adolescent . . . may also be deficient in such prosocial skills as self-control, negotiation, asking permission, avoiding trouble with others, understanding the feelings of others, and dealing with someone else's anger. The withdrawn youngster . . . may lack proficiency in . . . having a conversation, joining in, dealing with fear, decision-making, dealing with being left out, responding to persuasion, and dealing with contradictory messages. (pp. 4–5)

A skill checklist of prosocial developmental tasks serves as an objective basis for evaluating pupil behaviors. Pretest and posttest scoring is used to measure performance change. The Skill Checklist Summary includes the following 50 elements, divided into six major skill areas (Goldstein et al., 1980):

Group I. Beginning Social Skills
1. Listening
2. Starting a Conversation
3. Having a Conversation
4. Asking a Question
5. Saying Thank You
6. Introducing Yourself
7. Introducing Other People
8. Giving a Compliment

Group II. Advanced Social Skills
9. Asking for Help
10. Joining In
11. Giving Instructions
12. Following Instructions
13. Apologizing
14. Convincing Others

Group III. Skills for Dealing with Feelings
15. Knowing Your Feelings
16. Expressing Your Feelings
17. Understanding the Feelings of Others
18. Dealing with Someone Else's Anger
19. Expressing Affection
20. Dealing with Fear
21. Rewarding Yourself

Group IV. Skill Alternatives to Aggression
22. Asking Permission
23. Sharing Something
24. Helping Others
25. Negotiating
26. Using Self-control
27. Standing Up for Your Rights
28. Responding to Teasing
29. Avoiding Trouble with Others
30. Keeping Out of Fights

Group V. Skills for Dealing with Stress
- 31. Making a Complaint
- 32. Answering a Complaint
- 33. Sportsmanship After the Game
- 34. Dealing with Embarrassment
- 35. Dealing with Being Left Out
- 36. Standing Up for a Friend
- 37. Responding to Persuasion
- 38. Responding to Failure
- 39. Dealing with Contradictory Messages
- 40. Dealing with an Accusation
- 41. Getting Ready for a Difficult Conversation
- 42. Dealing with Group Pressure

Group VI. Planning Skills
- 43. Deciding on Something to Do
- 44. Deciding What Caused a Problem
- 45. Setting a Goal
- 46. Deciding on Your Abilities
- 47. Gathering Information
- 48. Arranging Problems by Importance
- 49. Making a Decision
- 50. Concentrating on a Task (pp. 73–74)

Having established this list of prosocial developmental tasks, specific lessons were constructed in relation to each. They are used to build individualized education programs. Each pupil can be described in terms of possessing a repertoire of nonfunctional or even antisocial behavior. As a complement to that repertoire, a list of prosocial and developmentally desirable behaviors is constructed for each individual pupil. Then a training program aimed at direct teaching of the prosocial skills is initiated. (Note the substantive similarity to Stephens' material in the chapter on slowed cognitive development, p. 155).

Specific, detailed lessons are taught.

The structured learning design depends on four components to assure that learning takes place and that it becomes functional in the child's daily life. They are modeling, role playing, performance feedback, and transfer of training. The pupil sees many precise and fully detailed illustrations (filmed, taped, live) of the model carrying out the behaviors the pupil is to learn. There is much opportunity to try again, to practice, under encouraging conditions. Role playing gets positive feedback, increasing as the pupil's actions approach closer and closer to those that were modeled (performance feedback). Ultimately, new skills are moved to real life situations, where they are monitored, critiqued, given additional performance feedback, and helped to become stable, habituated behavior (transfer of training).

Teaching is closely tied to assessment.

This kind of psychoeducational assessment and training breaks sharply with the medical style of diagnosis and treatment noted previously. The system of psychiatric categories becomes less relevant. Instead of diagnosing a youngster and then selecting a presumably diagnosis-related treatment, "behavioral and social learning approaches tend to tie assessment and intervention closer together." The intervention " is based in large part on the assessment. And the assessment is most often ongoing, so that the training changes as the youngster's performance changes. Assessment typically involves obtaining samples of . . . behavior in various settings. In this way, relevant environmental influences are taken into account in describing the behaviors and in developing the interventions" (Goldstein et al., 1980, p. 61).

These procedures are useful in the mainstream.

These procedures are aimed at adolescents. They seem adaptable to earlier ages, however, with minor changes in the instructional material and in interest level and vocabulary. Further, as the originators suggested, the developmental tasks they employ are appropriate for all children. Teachers and principals can use them with disorderly (not disturbed) pupils at all levels. So considered, they lend themselves especially well to employment in the mainstream and to preventive teaching, in the sense that some children whose behavioral repertoires are beginning to resemble those of the Quay groups might be taught to acquire stronger and more rewarding prosocial behavior styles.

Crisis Management

A sudden disruption in ordinary school activities—the confrontation or clash that promises to erupt into open conflict—the face-off between individuals or groups with strong and divergent motives—a child who has, or is on the verge of, a self-destructive or property-destructive act—these situations have come to be called *crises*. Every teacher and principal wants to avoid them. But they do occur, and they seem frequently to involve those pupils called emotionally disturbed.

Instability is at the fore of any crisis.

A crisis is a condition of precarious stability only a short step removed from a decisive change. Naturally, it is most desirable to avoid crises by reducing instability, but that is not always possible. The management procedures recommended by Grotsky, Sabatino, and Ohrtman (1976) are sound. They can be applied with pupils of all ages.

> A "crisis" involving an exceptional student is really no different from a crisis or problem involving any others in your class. Exceptional students are, first and foremost, persons. They respond to the same value appeal, threats, praise, and support that others do. Here are some things to keep in mind when a "crisis" occurs:
>
> a) A crisis is a disruption in your program. You have a choice at this point. You must decide whether the student(s) involved and the issues are important or whether your program is important. If your program takes precedence, mete out whatever consequences you normally would. Be prepared, however, for "spill-over" to occur sometime later that day or week. If the issue is not resolved by you, the student(s) will find some way to resolve it later. This may show up in the form of teasing, namecalling, pushing, fighting, or in some form of resistance to you, e.g., verbal abuse, refusal to cooperate. If you cope with the issue, you must realize that you may or may not be able to resolve it. Whether you do or not is unimportant. The fact that you recognize all students and their needs is important. This is what "building rapport" is all about.
>
> b) Everyone involved in a crisis has his own point of view as to what precipitated and maintained the crisis. Your task is to:

> (1) Calmly separate the children involved—physically if need be.
> (2) Reassure each child that his/her point of view will be heard completely and without any judgment of right or wrong on your part.
> (3) Piece the events together sequentially.
> (4) Try to arrive at a conclusion. If you have conflicting evidence, you can:
> (a) do nothing;
> (b) put the children involved "on probation"; or
> (c) administer whatever consequences you feel are appropriate. The important element here is to be fair. Students can accept differences in treatment as long as the differences are arrived at fairly.
>
> c) A "crisis" can be a learning situation. The others in your class know when you have to deal with a serious problem. They generally will not become disruptive. They may talk among themselves, continue their seat work or projects, or do whatever else you suggest. The atmosphere of "seriousness" that prevails during a crisis is generally sufficient to maintain order in your room. A calm demeanor and stable emotional posture by the teacher also contribute to neutralizing a crisis and reestablishing order. (Grotsky, Sabatino, & Ohrtman, 1976, pp. 4–5)

Everyone can learn from a crisis.

Sometimes the crisis is one person's, a matter of deciding on an issue. Work with Black adolescent girls in such crisis situations led Beard (n.d.) to point out that "the process in a crisis interview is very focused and limited to the immediate concerns. While it is important to solicit some feelings and to validate feelings of the client and the family, it is also necessary to remain firm, directed, and focused on the crisis issues" (p. 87).

Beard says that she finds it helpful to study and review the crisis situation, using this list of questions:

> 1. Who am I? What is the situation? What persons/agencies are involved in the situation? Why did the situation reach crisis stage? What are the needs of the situation? What do you expect from me?
> 2. What have you done? What do you understand to be the next step? What are the options? What is the most expedient use of the time we have now?
> 3. This is what I can/will do, this is what I cannot/will not do. What can/will you do? What cannot/will not you do?
> 4. Who is going to take responsibility for follow-up?
> 5. What is the plan after the crisis is over? (p. 88)

Correct followup can prevent another crisis.

Early Intervention for Detection and Correction

Early detection and correction of school adjustment problems is the objective of the Primary Mental Health Project in Rochester, New York. It is based jointly in the University of Rochester, the Rochester City School District, and suburban schools in Monroe County. It deals with three kinds of adjustment-risk indicators that can be observed in children: aggressive-disruptive behaviors, shy-withdrawn behaviors, and learning difficulties. The project started in 1957 in one school. By 1978 the operation was part of 25 Greater Rochester schools; about 25 other school districts in the country were using the same format; and the number was growing.

Note the similarity of these indicators to Quay's behavioral clusters.

"The child with high risk of school failure can be accurately identified in the first three school years. And if nothing is done for him, he is likely to follow a downward spiral that may end up in any one of a number of unfortunate social or personal outcomes." (Cowen, 1978, p. 62).

The work begins this way. Teachers in kindergarten and the first three grades observe the everyday behavior of pupils with whom they have sustained contact. Forms are used to record teacher observations. Parents of referred children are interviewed at home by social workers. School mental health professionals are available for consultation, to conduct group screening examinations, and to assist in planning preventive or corrective actions.

The actual special instruction with pupils is mainly in a one-to-one child-staff ratio, with occasional small group sessions. Trained and salaried aides, most often recruited from housewives who have volunteered, are given a course of instruction and work in school with the children, under professional supervision. Specific goals are set up in planning sessions with professional staff and parents. Child–aide interaction is aimed at the attainment of those goals. Staff conferences are used to monitor progress, give attitudinal professional guidance as needed, alter initial directions when they are not productive, and close out and reassign cases when help is no longer needed.

"There is now an ample data base testifying to the program's short- and long-term effectiveness." (Cowen, 1978, p. 62)

Program effectiveness has been tested several times with encouraging results. The probability of school failure can be markedly reduced at a fairly low dollar cost. That is accomplished, too, while the children remain in the mainstream of education and while regular class teachers and other school personnel grow in competency to cope with potential high risk pupils.

A number of detailed case descriptions pertaining to the project (Cowen, Trost, Lorion, Dorr, Izzo, & Isaacson, 1975) reveal the kinds of work done with children by teachers and aides and the results. Case reports range from short-term interactions to those that lasted two years or more. They exemplify a psychodynamic style of work with children who show a great range of learning difficulties and aggressive-disruptive and shy-withdrawn behavior. A little over 10% of primary graders received some special help over the primary years from project staff.

> Were I asked to identify the quintessential features of the Primary Mental Health Project, I would name four—each structural rather than substantive: its a) unswerving emphasis on very young children (i.e., primary graders); b) use of systematic early-detection procedures to identify school adjustment problems and competencies as soon as possible; c) use of carefully selected, well-trained, closely supervised nonprofessional help-agents (child-aides) to bring prompt, effective helping services to a geometrically expanded pool of young schoolchildren who urgently need such help; and d) changing the school mental health professional's role toward "quarterbacking" functions (e.g., recruitment, training and supervision of non-professionals, education, consultation) that support a truly geometric expansion of services (in contrast to rendering one-to-one services to a very few extreme casualties of the system). (Cowen, 1978, p. 63)

A Design for Full Educational Integration

☐Jowonio: The Learning Place, in Syracuse, New York, is a community school building that provides a learning environment for typical and severely emotionally disturbed children. The school has 50 children, aged 3 to 7 years; 20% to 25% of the children are considered severely multiply handicapped with emotional disturbance as their primary handicapping condition. By employing a ratio of 14 typical children to 4 disabled children, the advantages of educating troubled children in an integrated environment are maximized, such as increasing the possibilities for social interaction and appropriate peer modeling. Several of the disturbed children are developmentally delayed because of serious emotional conditions. A number of them have been called "autistic" and excluded from other programs. A purpose of Jowonio: The Learning Place has been to show that it is feasible and effective in providing excellent basic schooling in an integrated setting in which teaching is individualized and the social and emotional as well as cognitive development of all children is emphasized.

Integrated education for seriously disturbed children is effective.

The school has a history of parent initiation and has continued to place high value on parent involvement. Parents are asked for input in setting goals and the development of the learning plan. Each child's teacher-advocate is responsible for regular parent contact through phone calls and home visits. Formal written progress reports are given to parents twice a year, but personal contact is maintained with all parents at least biweekly. A parent trainer facilitates support and input to families about child management and ways to increase consistency of goals and interventions between school and home. Periodic parent meetings and open houses are held for educational and social purposes. Parents also participate as members of the school's advisory board.

The structure and ongoing activities of the eductional program are described by Knoblock.[5]

At Jowonio: The Learning Place, typical and handicapped children are assigned at the beginning of the year to a family group (located in a particular room). Each group, with three teachers, consists of 18 children, four of whom have been labeled disturbed. In addition, each group has an age spread of three or four years within it, and as much a balance as possible of sexes. Thus, in each group, there is a wide range of developmental levels among the typical children, as well as the handicapped children.

"Family groups" are formed.

Children remain in these groups for the majority of the school day, with some movement between groups for those children who profit from additional contacts for experiences with other children and adults. An individual learning plan with objectives is developed for each child and this plan is acted upon throughout the day. We utilize a developmental curriculum approach using developmental milestones appropriate to each child. During the day, each special child is worked with individually or paired with one other child with similar needs several times each day. At other times, the children work along with the other children in groups or on individual activities in their rooms. For the most part, the class groupings and daily schedule are designed to facilitate interaction between children of all developmental levels, whether they are typical or handicapped.

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[5] The following section is adapted and quoted from Knoblock, 1978.

Many support services are a part of total group activity.

We look like a school, in that children are in classrooms working independently, with a teacher or alongside a teacher. Our school is well provisioned with learning materials and supplies that are available for teachers to use with children or for children to use independently. Each family group has developed a daily schedule of activities designed to respond to both the group needs and the needs of individual children within that group. Our support services are built into a child's regular school day. For example, movement therapy is planned for many of our special children, but it may be done with all of the children in a family group. This allows all to profit from such an activity and does not necessarily single out a particular child. At the same time, there are highly specific remedial needs that some of our special children have and they may be responded to individually.

Our curriculum is as appropriate for typical children as it is for our children with special needs. The impact of this curriculum on aspects of prevention will be different for different children, but this is as it should be. Specifically, our curriculum is:

- Developmental in nature. Developmental milestones are looked at for each child regardless of label.
- Individualized and highly specific to the needs of each child.
- Activity-based to the extent that we believe the proper goal of education is to actively involve each child, to the extent possible, in direct contact and manipulation of learning materials.
- Focused on fostering responsible decision-making for those children able to make choices and for others to work on the development of self-control, improved self-concept and internalized controls. (Knoblock, 1978) ☐

Removal can be avoided.

A growing number of special and regular educators are using early warning signals like those generated in Rochester project schools to alert regular teachers and parents to pupil needs. Almost always they find that the needs can be met then and there, without the trauma of removal from class. Broad-based individualized instruction programs like the Adaptive Learning Environments Model (Wang, 1981), described on p. 498, also make it less and less necessary to establish new resource rooms. Increases in educators' technical

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The proverbial spectator from Mars would certainly remark on how easy it has been to get emotionally disturbed children removed from regular school and classes and how difficult it has been to get them back in. If all of the children now getting along in regular grades were moved out and were required to pass through the complex processes set up in many places for readmission of emotionally disturbed pupils in order to get back in, it is doubtful if more than half would make it.

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skill and know-how, acquired through demonstrations in settings like Jowonio: The Learning Place, reduce the need for self-contained classes. They also lead to significant changes in the functions of day and residential schools, the most obvious of which is the move toward short-term, intensive programming and less long-term custody.

> The very creation of an integrated setting provided area professionals and parents with an opportunity to observe integration at work on a daily basis. During our first year, we had close to 200 visitors, and the number increases as our program gains visibility.
>
> On still another level, we are demonstrating to our satisfaction, and convincing some school officials, that children as seriously involved as ours are capable of learning and relating and should be programmed for within schools and in the community. (Knoblock, 1978, p. 109)

Results are visible to all.

A Modern Residential Setting

Historically, private schools have taken in some of the most difficult of every nation's educational tasks and led the way to innovations. Special schools for seriously disturbed children like the one described below are excellent illustrations of that point.[6]

☐The place is the Spaulding Youth Center in Northfield. It is a school unlike any other school in the state, designed to meet the needs of deeply disturbed youngsters ranging from autistic 3 year olds to teenagers for whom acting up has become so much a part of their lives that they are headed for serious trouble—not just trouble with the law or their schools, but trouble with society so profound that they may end up in institutions if they cannot be helped....

The center always has worked with emotionally disturbed youngsters, but its methods have been in a constant state of change. A Freudian approach based on therapy was the route taken for many years, but that changed during the 1970's. Today an intense form of behavior modification is practiced, and the center has gained a national reputation for its innovative programs. In addition to the basic program, a host of related services have grown with the center....

Applied behavioral analysis is the educational procedure of choice.

The Spaulding program is based on a constant flow of strong, immediate reinforcement of good behavior. Dr. Ian Spence, treatment director at Spaulding, says, "It is teaching, not a strict psychiatric approach. We use what is called a management technique. We look for the good things the youngsters do, and we praise those things. The children experience success, they like success, and they keep it up."

Spaulding has a population of 82 youngsters and a staff of 120. While not all the staff members are teachers, they all are trained carefully in the Spaulding method. At the heart of the system is a carefully defined code of behavior that is known to all the staff and is made clear to the students right from the start. It is the basis for transforming disorganized lives into organized lives. The emphasis is on rewarding good behavior, and every member of the staff looks for and rewards it throughout the day.

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[6] Nichols, 1980. Reprinted by permission.

Whether it is from a teacher in the classroom or a cook in the kitchen, a steady stream of encouragement for good behavior flows over the students. Pats on the back and words of encouragement become a part of the lives of youngsters who attend Spaulding.

Pupils recognize responsibility for behavior.

Undesirable behavior is dealt with through something called "standing out." When a student misbehaves in some way, he or she is told, "You've earned a standout," and for two minutes the student breaks away from the group and stands alone. It was the school's idea to have the students stand apart from the group, facing away. The students added the touch of leaning against a wall or a tree during standout.

Members of the school's staff do not make a big deal of a standout. Voices are not raised, the youngsters are not berated, and when the standout is completed the matter is dropped. In cases of extreme misbehavior, small, isolated rooms are used for standouts, and the harshest punishment handed down at Spaulding is five minutes in one of the rooms.

"We don't dwell on the mistakes," Hively [the Executive Director] says. "We find each youngster's strengths and we play to them. We help them to feel successful, but we do it in an honest way, not with made-up successes."

The students at Spaulding always know where they stand within the structure. They know the rules, and they know the rewards and punishments. They start school with virtually nothing and they go on to earn everything, from the pictures they are allowed to put on the walls of their rooms to outings at Mt. Kearsarge. They know that no matter whom they deal with at the school, they will receive the same treatment.

Structure and teaching intermingle.

When a youngster enters Spaulding, he moves into a carefully structured world where everyone is a teacher of some kind. Some teach in the classroom, some on the playing fields, and some in the dormitories, where personal hygiene, neatness, and getting along with others are the subjects. The rules are always the same, and good and bad behavior bring predicatable results every time.

Many youngsters who come to Spaulding are taking medication to control their behavior. That does not last long, Hively reports. Only in rare instances does the medication continue and, except for drugs used to treat ailments such as asthma, students at Spaulding do not take drugs of any kind.

Instruction moves into the mainstream as soon as possible.

When they arrive at Spaulding, some youngsters are as much as five years behind others their age in school work. Academic success at the school varies, but some students will pick up as much as two school years in one year once they adjust to the school. The children spend four hours a day on academic classes, and they are grouped according to general temperament and ability, rather than age.

The classroom settings range from one-on-one meetings with teachers at a very low level of learning to situations that closely resemble a public school classroom. When children are nearing the time when they can return home, they attend classes at a public school nearby.

Teaching these youngsters is a demanding job. Aileen Stan-Spence heads the school's classroom instructors. "At first the teachers are trained to ignore the negative and see only the positive. There is a strong emphasis on responding to the positive from the beginning.

"When a standout is called for, we make it clear that the youngster himself is the one responsible. We don't say, 'I'm going to give you a standout,' we say, 'You've earned a standout.' We tell them we don't own their behavior and we are not responsible for it. They have to accept the consequences for their own behavior, and in time they learn this."

Success at Spaulding is helping a youngster reach the point where he may return home to his family and his school. The average length of time for a student to stay at Spaulding is 18 months, but many leave well before then.

Short-term, intensive stays are most characteristic, with family involvement included.

Spaulding does not work just with youngsters. The center has a program that involves parents in resurrecting the lives of their children.

"The children are far away from their homes and families," Spence explains, "but we try to work closely with the entire family and design a family training program. We develop a plan for the family, and they all become a part of the process."

In fact, Spaulding has become much more than just a school for troubled youngsters. Today it is a true center, not a school, offering a broad range of programs all relating to the special needs of these children.

In addition to the residential program and the family program that accompanies it, there is a day school for about one dozen children who live at home but attend school at Spaulding during the day. The center also operates a diagnostic outpatient clinic for families and schools that have children who may require special programs.

Dayschool is available.

Even within Spaulding Youth Center there is a group of students with special needs, the children in the center's autistic unit. In 1972, the center first started working with autistic youngsters; several years later a separate cottage for these children was built on campus. Today there are 24 children in the program—14 living at the center and 10 others who arrive there daily. They range in age from 3 to 15 years.

A special unit for autistic children uses the same approaches.

Autistic children exhibit severe behavioral disorders. They seem to live in shells, cut off from the rest of the world; an early sign of success when working with an autistic youngster often is just managing to get that child's attention.

Each youngster in the autistic program has a plan tailored to his or her individual needs. Because of the children's speech difficulties, signing is taught along with verbal communication, and in time the children begin to grow. The program involves intense direct personal intervention by the teachers, and the same Spaulding approach of rewarding good behavior again and again is employed with the autistic youngsters.

The goal with the autistic children is the same as with the other students at the center—to find the least restrictive environment. Says (unit leader) Freschi, "There is no need to institutionalize or warehouse autistic youngsters." Some of the autistic youngsters go back home to special programs in their own school districts, and he says many of them might work well in sheltered workshops or similar situations. (Nichols, 1980). □

Examples like the Rochester Project, Jowonio: The Learning Place, and the Spaulding Youth Center highlight three points:

- The move toward mainstream education with emotionally disturbed youngsters is steady and consistent.
- Teachers and principals are most effective when they share responsibilities with parents and with other school staff members, including those who are not, in a formal sense, educators.
- Individualized education programs do produce positive results with emotionally disturbed pupils.

A Developmental Frame of Reference

Good education fosters development in all children.

Education for emotionally disturbed children that capitalizes on psychoeducational developmental concepts has the best chance of success. Using a developmental frame of reference calls for "viewing behavior sequentially [and recognizing] the importance of responsive environments interacting with an individual's maturational processes" (Knoblock, 1980, p. 563).

Wood's (1975) list of assumptions that undergird a developmental frame of reference is one with which we concur fully.

> Emotional and behavioral disturbances in a young child are interwoven with normal functioning and often are difficult to differentiate.
>
> Normal processes of physical and psychological development follow in a hierarchy of stages and sequences well documented in literature.
>
> The normal process of change is uniquely individual, yet predictable, and occurs in relation to environmental conditions, experiences, biological constituents and to the foundation laid in prior experience.
>
> The young child's knowledge of himself, his confidence in himself, his willingness to risk himself in new situations, grows out of significant pleasurable experiences.
>
> The young child learns and grows by experiences. (pp. 3, 4)

It should be added only that the developmental point of view applies with equal force in educational efforts with all exceptional children and youth. As we examine instructional strategies and therapies in the next section, it will be increasingly evident that many of the procedures identified with teaching emotionally disturbed children are also employed with other exceptional children, though with different names.

Instructional Strategies and Therapies

Teaching consciously aims at changing pupil behavior; so does therapy.

Probably because of longstanding connections between psychiatry and the treatment of emotional disorders, many developmental management procedures used in educating and rehabilitating disturbed children have come to be called "therapies." A recent book entitled *Understanding and Teaching Emotionally Disturbed Children* (Newcomer, 1980) describes ten "therapies" and is explicit in saying teachers are therapists, too, when they:

> 1. Incorporate affective components into the curriculum to teach children about their emotions and the effect that emotional disorders have on others.
> 2. Remediate relatively mild emotional problems through the use of alternate therapeutic procedures.
> 3. Identify and refer severely disturbed children to mental health personnel so that the children might receive appropriate treatment.
> 4. Cooperate with mental health experts in planning and implementing treatments for severely disturbed children within the classroom. (p.33)

Newcomer views any "shaping of children's growth in nonacademic areas" as therapy, and believes teachers should deliberately take on the therapist role (pp. vii, 133). We certainly agree that teachers are well within professional bounds in all of those activities. We are quite comfortable, though, to simply call it part of good teaching.

Brief summaries of the ten approaches identified by Newcomer are listed below in alphabetical order. The format is intended to help teachers and principals recognize and compare them. Also, it should be understood that *these "therapies" could just as well be called "instructional strategies or orientations"* and that *they are applicable to any children, regular or exceptional.*

These approaches can be used with all children.

Art therapy presumes that mentally ill individuals who draw or paint will often express what is behind their disturbed behavior. They may do so directly (e.g., picturing a hated father) or indirectly (e.g., using colors and space so as to show anger or the feeling of being enclosed). Such acts of artistic self-expression are, in themselves, thought to be good, because the individual is inclined to feel better afterward. In addition, the art work can be used to stimulate verbal or other interaction with psychotic or withdrawn children. The art product, too, fosters sublimation, giving personally and socially unacceptable matters a culturally acceptable medium of expression.

With children, the process calls for giving access to art materials, watching and stimulating the child's work, getting the child to talk about the work (interpret it), and discussing the meaning of the work with the child. Interaction with the child is acceptant and nondirective, based on neo-Freudian psychoanalytic principles. Art therapy is considered particularly applicable for children between the ages of 3 and 13.

Behavior modification, a form of behavioral therapy, is the use of behavior modification knowledge (Bandura, 1969; Lazarus, 1971; Lindsay, 1954) in clinical cases of emotional disturbance. Since this way of employing applied behavioral analysis is well known (see pp. 231–232) it need not be discussed further here.

Clinical-behavioral therapy is another form of behavioral therapy. It is arbitrarily distinguished from behavior modification in that the clinical-behavioral procedures are more focused, in one-on-one settings, on treatment of specific medical conditions by psychiatrists and clinical psychologists.

Drama therapy builds on the notion that persons can achieve insight about the forces that guide their actions if they act out portions of their lives. Thus, individuals can create scenes that portray significant life experiences. In those scenes, they can role play themselves, interacting with other special people in their backgrounds. Drama therapy was invented as a form of psychotherapy (Moreno, 1964), incorporating a six-part structure and a set of techniques which contributed to getting the most out of the process. It is a type of group therapy, with emphasis on creativity and spontaneity. Its roots are in psychoanalytic psychology, with the chief outcome being catharsis, the term for a relieving release of emotion that should help toward insight, or a new and better understanding of the life experience portrayed in the drama.

Sound teaching is therapeutic.

Educational therapy is simply sound corrective and developmental academic skills instruction combined with effective class management strategies. When emotionally disturbed children are taught in a setting that has those characteristics, the children are said to be receiving educational therapy. Thus, educational therapy is the systematic promotion of optimum academic skills and nonacademic behaviors. Academic skill building is usually based on one of the individualized instruction models, (such as ALEM, IGE, or precision teaching). It is not clear where and how the expression "educational therapy" originated. We suspect it was neologized when psychiatrists and clinical psychologists incorporated basic educational procedures into their domain as a form of "treatment."

Teachers often apply these procedures informally.

Group therapy is a type of psychotherapy in which several people participate, usually with a leader, in a discussion of their problems in an attempt to solve them. Psychoanalytic, behavioral, cognitive, and other psychological processes may be employed. Group therapy can use play, dance, games, music, or any other group interaction format. The most common is discussion, conducted in the context of a set of principles called "group dynamics." These principles address how to deal with group size, leadership, communication barriers, authority, responsibility, and other process matters that influence group behavior. Teachers have made informal use of analogous procedures from time immemorial in such situations as helping a class reach group decisions about a proposed action (i.e., whether to do it, the time, the place, the consequences).

Milieu therapy derives from the French word, one of whose meanings is "environment." The essential notion is to construct and maintain an environment which, in itself, will have an improving effect on emotionally disturbed persons. The rationale is that social-psychological influences figure prominently in both the genesis of disturbed behavior and in its management and final eradication. Thus, it is reasoned that a consciously contrived *therapeutic milieu* or *community* can supply the interpersonal relationships necessary to allow groups of disturbed individuals to shed their faulty behavior patterns and acquire behavior repertoires that eventually permit them to work their way out of the artificial environment and learn to function in the "normal" range of humankind. The concept emerged in modern times as a way to deal with post–World War II emotional casualties. It was adapted for children in the United States shortly thereafter (Bettelheim & Sylvester, 1948; Redl, 1959). Because of the need to monitor the child's total environment, 24 hours a day, milieu therapy tends to be applied in residential programs, where the social structure, the value and reward systems, and physical routines and options can be well controlled.

Music therapy has essentially the same psychoanalytic rationale as does art therapy. The purpose is to promote desirable changes in behavior. Proponents point out that music supplies a universal way of communicating. It seems readily adaptable to different interests, backgrounds, ages, and cognitive-affective states. It allows self-expression in a variety of modes. It can be used individually or with groups. It can be the major activity, can complement other therapies, or simply provide background. There seem to be no age boundaries to its use.

Play therapy is a form of psychotherapy in which the subjects, typically young children, act out situations expressive of their emotional problems. The expression "act out" has a special meaning here, namely to demonstrate or illustrate by pantomime or words or gestures. In this case, it is in the spontaneous behavior of play, under natural and presumably comfortable conditions, that children give vent to their feelings. In a permissive setting, individually or in groups, they are encouraged to do or say what they think or feel. They are furnished toys that are likely to provoke "playing house" or "playing school," in the hope of surfacing their possibly distorted understandings and feelings about those places and their occupants. Once observed, the fears, worries, or wishes can be talked about or "played" about in efforts to modify them or their effects.

Feelings are revealed through play.

Rational-cognitive therapy starts from the assumption that emotionally disturbed states arise because of certain forms of inappropriate thinking and learning. Since thinking and learning processes are, themselves, learned, it is postulated that new learning can correct or minimize errors. As the name "rational-cognitive" implies, unrealistic, damaging, and illogical thoughts are considered the culprits that touch off disturbing, maladaptive feelings. The object of the retraining (therapy) is to change the disturbed person's internal cognitive operations (perceptions, thoughts, beliefs, ideas, and attitudes). By working on self-verbalizations, problem-solving patterns, and other internalized mental functions, and by concentrating directly on such actual but subjectively known events, changes in externally observed behaviors are expected to result. Some hold that rational-cognitive therapy and behavior modification are both part of applied behavioral analysis, that their concepts and procedures are the same. Others conclude that because rational-cognitive therapy attempts to alter internal symbolic functions it does not belong in the same camp with behavior modification, which operates only upon objectively observable behavior. In any event, this form of therapy, with its attempts to help disturbed children to learn to clarify their thinking, is an active one.

Corrected perceptions can influence behavior.

Most of these ten therapies, even those with long histories in the mental health literature, have had informal counterparts in education for even longer. For instance, play therapy, *as a recognized therapy,* certainly is a half century old. Yet there are much earlier accounts in education of the efficacy of play as a way to help children to objectify, clarify, and crystallize formerly abstract learning, and to correct misapprehension in the process. These ten thumbnail sketches, therefore, were intended to help dispel any mystique the term "therapy" might carry and to start a familiarization process for principals and teachers that could result in much wider use of what is educationally helpful in them, for all children and youth. Fenichel (1966) made the following observation:

What educators call education, mental health workers call therapy.

> We have found that in working with seriously disturbed children the differentiation often made between education and therapy becomes largely a semantic one. A teacher who fosters self-discipline, emotional growth and more effective functioning is doing something therapeutic. Any educational process that helps to correct or reduce a child's distorted perceptions, disturbed behavior and disordered thinking, and that results in greater mastery of self and one's surroundings is certainly a therapeutic process.
>
> Whether we call it education, re-education, counseling, guidance, remediation, conditioning, rehabilitation—any process that helps a child lose some of his feelings of helplessness and that, to a greater or lesser extent, helps him attain greater mastery of self and life situations is therapy. (p. 17)

Prevailing Versus Preferred Practices

Again we need to move away from the parallel columns pattern used elsewhere in this book to contrast *what is* and *what ought to be* in the education of emotionally disturbed pupils. Three major points of difference are evident.

Sound initial teaching minimizes disturbances.

First, teachers and principals have at hand good procedures for finding children who are at "high risk" while they are very young and usually before the condition is extreme. Programs like the Rochester Project show how to do that in the preschool years and the first three grades. So does the work of the Cantrells (1976) and others like them. So *it is no longer justifiable to wait until pupils show emotional disturbance at a "serious" level to begin to remedy the matter.*

Remedial techniques do work.

Second, remedial procedures that work are readily available. They are portable, too, and can be moved into regular classes and used by regular teachers. Moreover, procedures that teachers find effective in correcting incipient and early stage emotional maladjustments are very much like—if not the same as—procedures that work for children with learning disabilities or slowed cognitive development, and for most other exceptional children. Thus, *it is now preferred practice for special and regular teachers, both with broader training, to do in regular classes what formerly might have required resource room or special class facilities.*

Centers for brief, intensive remediation have a place.

Third, the most disturbed and educationally complex children are often being accommodated and helped in their regular schools, both elementary and secondary. That happens when the valuable resources of the "special school" are moved in and joined with the rich resources of the regular student body and faculty. *Now, the special school shifts from a large, self-contained, long-term, stable enrollment of boys and girls to a multifaceted, short-stay resource center that has direct and rapidly shifting liaison with regular schools.*

The movement away from the relatively static stance of educational work with disturbed pupils that characterized the 1960's and early 1970's still seems to be accelerating. The 1980's promise continued change in the direction of the preferred practices described above.

> *Most efforts to provide appropriate special education in public schools for emotionally disturbed students—the anxious, phobic, violent, and chronically disruptive as well as the tough disordered and autistic—have focused on younger, elementary level students. Older disturbed students have been permitted or encouraged to be absent from class frequently or to leave school early without graduating....*
>
> *If one ackowledges the stress and avoidance behavior stimulated in us by bigger, older, stronger, sexually more mature seriously emotionally disturbed students, it is easier to understand the tendency of teachers and administrators to exclude them rather than plan for their education. No other group arouses so strongly the contradictory impulse to punish as well as to heal (Wood, 1979).*

The Role of the Regular Class Teacher, Special Teacher, and Principal

Teamwork with Specialists

Probably no group of children attract more attention from a variety of professions than do those called emotionally disturbed. For years, child guidance centers and mental health teams have called for coordination of psychiatry, social work, psychology, education, and home and community. More recently, pharmacology, neuropsychology, and applied behavioral analysis have made important contributions, both to understanding and to management. The net effect is that principals and teachers have many potential allies.

In all of this, though, it may be easy to lose sight of the main purposes for the child being in school. The principal and teacher, working closely with parents, will find it necessary to maintain emphasis upon the child's attainment of the personal, academic, social, vocational, and related life coping skills that are at the heart of the school's functions.

Focus on educational goals is primary.

Special Objectives for Teachers and Principals

A variety of excellent lists illuminate teacher competencies that are needed to perform well the job of teaching emotionally disturbed youngsters (Wood, n.d.). In a great many respects these competencies are similar to those called for in excellent teachers in general. Even those which might, on the surface, seem unique to work with emotionally disturbed pupils are really needed by teachers of learning disabled, retarded, physically and health impaired, and other pupils. For instance, which teacher or principal does not need a high level of skill in coping with crises? Who does not need an excellent command of procedures to prevent or redirect inappropriate pupil or class behavior?

There are, though, some special objectives that ought to be reemphasized at every possible point (Wood, n.d.). One is the principal's combined role of leadership and support. That is very much needed by teachers, for few activities can be as discouraging, disappointing, and personally dangerous as work with emotionally disturbed pupils.

Along with support and leadership from the principal, another step is for the school staff to build and maintain in-school and community opportunities for emotionally disturbed boys and girls to find both encouragement and understanding. Especially when these youngsters live in foster homes or other kinds of contrived family simulations, they may feel very much alone not only in school, but especially in out-of-school hours and on weekends.

Make time for teachers to gather data and plan.

Principals and supervisors should arrange time for observation of the emotionally disturbed pupil by the teachers who will be responsible for that pupil's instruction. Such "get acquainted" opportunities should include seeing the pupil in classes, hallways and free time, in shops, in the cafeteria, in the library, and in other school-relevant situations. The principal's own observations can be shared with the teachers. The principal can sometimes "pinch hit" for a teacher for 20 or 30 minutes, allowing that teacher to move with and note the child's demeanor at the end of one instructional activity and the beginning of another.

Use a behavior checklist to keep track of the things the pupil does and how well they are done. The Skill Checklist Summary (p. 274) gives some ideas of what could be on such a list. Noting what the pupil does not do, or does poorly, also gives clues to what behaviors may need to be taught. Teachers and principal should compare and confer over what their checklists reveal.

Be sure all responsible educators are in agreement concerning their expectations for the pupil or pupils in question. The principal or a teacher may need to take the initiative to schedule a periodic conference to verify that all concerned are aimed in the same direction. Consistency with home expectations is imperative, too, and each pupil needs to be made aware of and to share in the responsibility of monitoring progress toward goals.

Comprehensive Programming

The behaviors that cluster under the umbrella of emotional disturbance become particularly visible in school. They can be nourished by weaknesses in the instruction pupils receive. Thus, the most desirable kind of comprehensive programming would certainly be that which repairs and strengthens instruction.

"I had a friend, but his parents told him I lived in a home for bad kids. So he's not allowed to be with me anymore." (Child from a neighborhood group home)

Morse (1976) described how teachers in a school with high problem incidence altered the climate of the school. Increased teacher competence in both psychodynamic and behavior modification procedures led to more personalized teaching and to the introduction of early detection and correction as a major objective. The work of Cowen and his associates (1975), which drew most heavily on psychodynamic procedures, supported the same viewpoint. It should come as no surprise that we encourage emphasis on early detection of high-risk situations for each child in terms of demonstrated needs as the first objective of comprehensive programming. Operationally, that means that a program that does what the Rochester program does ought to be installed in every school. Second, the lessons of Jowonio: The Learning Place should be moved into regular schools, at all levels. Third, selective use of short-term stay special centers, with strong liaison with the pupil's home school, rounds out the elements of a thorough approach to the education of emotionally disturbed pupils.

Professional sharing strengthens programming.

As in comprehensive programming for other exceptional pupils, there is a need to share professional competencies, materials, and goals among all professional staff. It is difficult to imagine a truly comprehensive school program for one category of exceptional child that was not linked with equally comprehensive programs for all exceptional children.

Summary

What Every School with Emotionally Disturbed Pupils Should Have

The point has been emphasized that educational provisions needed by mentally retarded, learning disabled, and emotionally disturbed children have much in common. It is suggested that the checklist on p. 169 of Chapter 5 be applied to the pupils dealt with in this chapter. It is our impression that one need only substitute "emotionally disturbed" for "mentally retarded" or "slowed cognitive development" and there will be a close to perfect fit.

The Continuing Need for Teachers and Principals

Until recently, very few regular class teachers and principals had opportunities during training to become acquainted with special education for children with emotional disturbances. Also, only a relatively small cadre of specialists could be found. That situation is now changing rapidly. Public and professional concern about discipline is one major reason. The serious search for comprehensive solutions, not just band-aid treatment, to violence, vandalism, aggression, and defiance has led to the application of social and personal reeducation techniques in new and more productive ways. There now exists a large market for knowledge and skill in the education of emotionally disturbed children. The odds seem good that the present demand will continue unabated.

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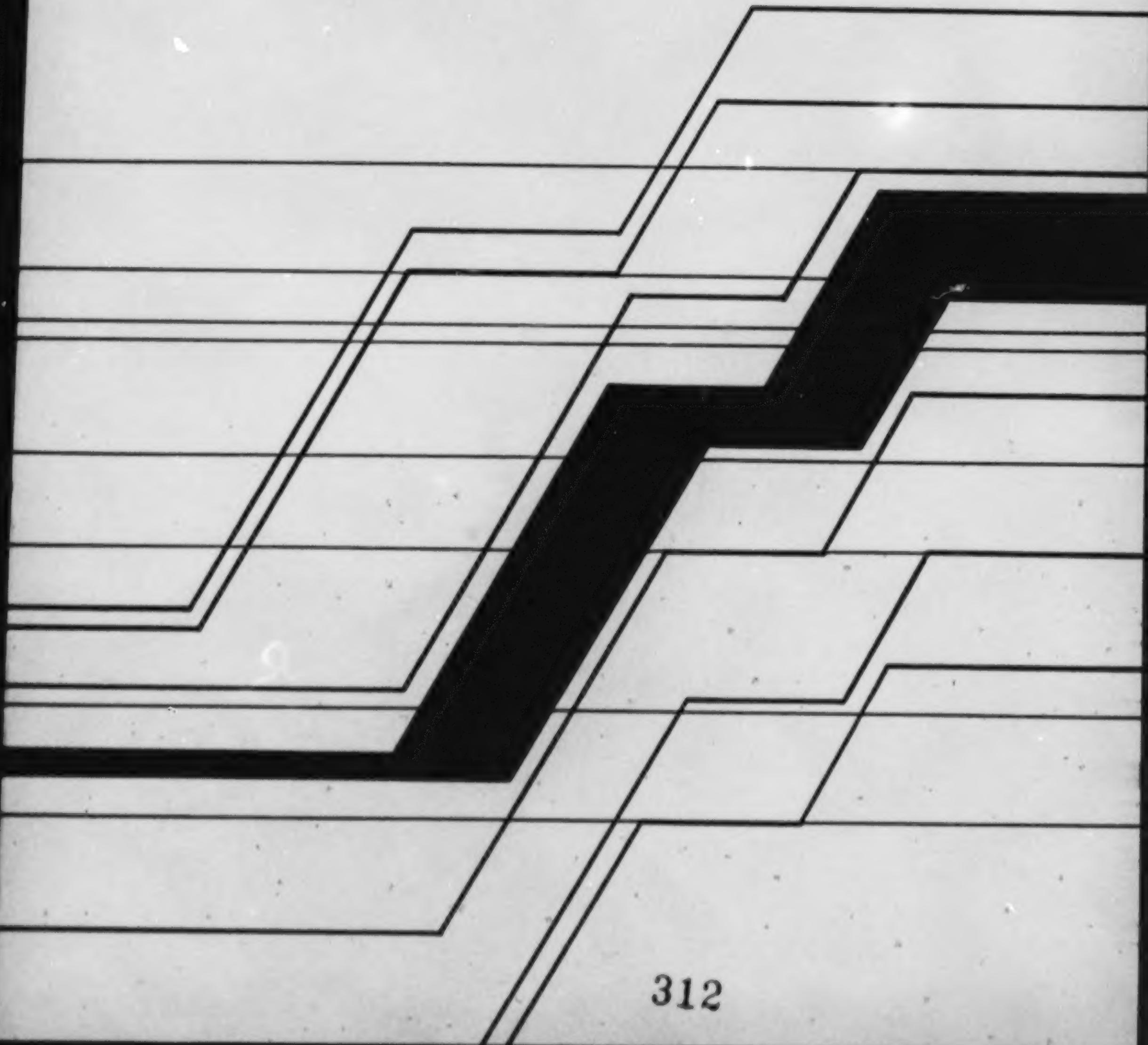
CHAPTER 9

Physical and Health Impairments



Chapter Outline

- The Challenge to Educators
  - Health and Social Welfare Considerations
    - Health Professions Terminology
    - Volunteer Agencies
  - Educational Considerations
  - Mainstreaming

- Technology, Special Procedures, and Preferred Practices
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- Topical Bibliography

The Challenge to Educators

Mary F. Ramsey taught primary grades for 5 years, then for 18 years taught physically impaired pupils who were homebound. After taking a year-long sabbatical leave to visit school programs for physically impaired students, she taught 12 more years at a special public day school for physically impaired children and youth. Her remarks during this interview (Aiello, 1976b) call attention to several themes that will be more fully developed later in the chapter.

Q. What prompted you to become a special education teacher?
A. Although I was a regular class teacher for 5 years, my heart has always been in special education. When I was a child I had a sledding accident and I spent 2 years at home, with no help from the school with my school work. I spent all that time plugging along on my own, and the realization of what it meant to be handicapped always stayed with me. When I had the opportunity to work with physically handicapped[1] children I welcomed it.

A teacher "tells it like it was and is."

Q. What were some of your first experiences as a special education teacher?
A. Back then, physically handicapped children were always taught at home. I was one of the first teachers of homebound instruction in the city and I drove all over town working with children. I worked with doctors, home-school visitors ("truant officers"), and regular class teachers to get my children back in school. It wasn't always easy, but many children got to regular classes in high school and some went on to college.

Q. Do you have any success stories to share?
A. Oh, my yes! As I said, I always felt that many of my students could be in the public school. I remember one girl in particular who had a number of operations on her face and she was quite upset by this. Even after she had very effective plastic surgery, her doctor routinely signed an excuse for her to be out of school. I tracked down the doctor—literally chased him all over the hospital—and explained to him how important the group setting of regular classes was to her social adjustment. The doctor said he hadn't thought of that, so together we got her back into school.

Other professions often welcome educational consultation.

Q. What were some of your most difficult moments?
A. Back in the 1930's medical technology wasn't what it is today and some of my children died. It was terribly difficult for me when a child died....

Q. Over the years you've seen successful and unsuccessful teachers. What do you feel accounts for success?

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[1] In this book we call these youngsters physically impaired. For educational purposes, physically impaired children and youth are defined as those with crippling conditions, illnesses, or other physical health problems which make some form of special education or school service necessary. Physical impairments that primarily involve hearing, vision, and speech are dealt with in other chapters.

A. When teachers were successful they showed genuine caring and empathy for all children. These teachers were exceptionally creative and they always made the child aware of what he could do.

Q. Mainstreaming, or the placement of exceptional children in the least restrictive alternative of the regular class, is an important issue for special educators today. Does the mainstreaming issue relate to your past experiences?

Knowledge reduces fear.

A. Back in the 1940's, I always thought that many of my students could be in public schools. Children who posed behavior problems tended to frighten the regular class teacher, and the basic problem with mainstreaming back then and today is that teachers are afraid when it comes to handicapped children. They don't know what to expect.

Q. What was the attitude of public school people when you tried to place your physically handicapped students in the regular class?

A. I found then, in the 1940's right up through the 1970's, that often public school people have difficulty accepting handicapped children. But I found that when I myself worked with the regular class teacher and helped develop the necessary skills, I could pave the way for a more positive reception for my students.

Regular school socialization is preparation for life's mainstream.

Q. What is your opinion of the mainstream movement?

A. The school experience should prepare all children to live well in the mainstream of society. It is our responsibility as teachers to make that happen, and placement in regular settings is one of the best ways I know.

Q. How have you seen special education change?

A. The changes that I see are for the better. Today almost every type of handicapped child is being served, and new programs have begun to include the multiply handicapped. Today the gifted, physically handicapped child is being served well.

Q. Do you have any advice to special education teachers who are just starting out?

A common background of professional competence and experience is valuable.

A. I would strongly encourage special education teachers to get at least one year's experience in the regular classroom. My years as a regular teacher gave me unusual perspective on learning and child development and helped me to be a much better special education teacher. But to both regular and special teachers I have the same message: You need dedication, empathy, creativity, and originality. And remember that confidence comes with years. (pp. 4–5)

Recent conversations with other teachers who, like Mary Ramsey, have rich backgrounds of experience in work with physically impaired pupils, also point to the need for career and vocational preparation for such youngsters. That is necessary for all young people, of course, whether exceptional or not. But children and youth with physical impairments tend to experience problems related to environmental control, mobility, energy level, and access that make early and consistent career and occupational guidance, encouragement, and training especially necessary.

Health and Social Welfare Considerations

In recent years, children, youth, and adults with crippling and other health impairing conditions, as well as other exceptional pupils, have been the focus of a growing body of federal and state laws and judicial decisions. They are predominantly helpful. Not so long ago, physically handicapped persons were ridiculed and derogated and were, at best, the objects of a doubtful charity. The legal foundations for real equality of opportunity are now in place, however. They are interlocked with increased medical and psychosocial knowledge and with changes in the health and social welfare professions.

First-class citizenship builds self-esteem and feelings of self-worth.

The major concern of the health professions is increasing life expectancy. It is accomplished in two ways: (a) by preventing accidents, anomalies, and diseases, and (b) by limiting the effects of those accidents, anomalies, and diseases that do occur. Despite strong efforts, however, success is only partial. Each advance in the health sciences is bought at some price, such as increased viability of impaired infants. The net result is that every wave of newcomers to kindergarten contains crippled and other health impaired children who need teaching, facilities, and services of special kinds.

Health Professions Terminology

The following medical terms identify those children with special needs who are most often found in educational programs for pupils with physical and other health impairing conditions. It is important to point out three things immediately: (a) the names of medical conditions give few clues to individual special educational needs; (b) only a minority of children with these conditions have any special education needs at all; and (c) there is no educational justification for grouping these children in school by their medical diagnoses. Each of those points can be elaborated later; the emphasis here is on supplying teachers and principals with information about medical factors.

Understanding common disorders strengthens communication.

Allergies. Adverse sensitivities or low tolerances to specific substances that are not problems to people in general. Reactions may take many forms; the most common are watering eyes, sneezing, nasal discharge, itching, or rash.

Arthritis. Inflammation of a joint, making motion difficult, painful, and limiting its scope.

Asthma. Repeated occurrence of wheezing coughs, difficult breathing, and feelings of constriction because of bronchial contractions.

Autism.[2] Severe communication and other developmental problems generally characterized by disturbances in interpersonal and object relationships and in language, often evidenced by stereotypic behavior and/or self-stimulation.

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[2] Autism was placed within the category of physical and other health impairments in January, 1981, when a revision of the regulations governing Public Law 94–142 removed this condition from the category of seriously emotionally disturbed. For purposes of instructional planning, however, children who manifest autistic behavior are generally considered severely handicapped. Thus, their needs and characteristics are more fully described in Chapters 8 and 13.

Cerebral palsy. Several forms of paralysis due to brain damage. The most common forms are *ataxic,* shown by marked inability to coordinate bodily movements; *athetoid,* appearing as slow, repeated movements of the limbs; and *spastic,* characterized by abrupt contractions of muscles or muscle groups, producing interference with and distortion of movement. All forms involve involuntary movements, and they appear in various combinations in different body locations depending on the nature and sites of the brain damage.

Congenital anomaly. Any body organ or part existing in an abnormal form from the time of birth. This condition can affect the whole body, as in dwarfism (unusually small size) or albinism (absence of pigmentation); can be limited to one part (absence of an arm or a leg); can be clefts (cleft lip or palate); or can affect internal parts like the spine or spinal cord (spina bifida), or malformation of the heart.

Diabetes. Disorder of metabolism of carbohydrates that is indicated by excessive amounts of glucose in the blood and urine.

Epilepsy. Disorder of the brain sometimes resulting in convulsive movements and periods of unconsciousness of approximately 5 minutes and sometimes in brief lapses of consciousness (up to 10 seconds) or feelings of unreality, dizziness, or semiconsciousness.

Hemophilia. A condition in which the normal blood clotting procedure is defective, with consequent difficulty in stopping bleeding when it occurs for any reason on the surface or within the body.

Leukemia. A form of cancer affecting the balance of cells in the blood and, therefore, the normal functioning of the blood.

"When I first found out I had diabetes I was scared and almost started to cry. I did not know what to expect or what my life was going to be like. But after my doctor, nurse, and dietitian taught me the things I would have to do each day—taking insulin, urine testing, and eating right—I decided that diabetes wasn't that bad.

"Basketball was my major concern. I don't feel that diabetes affects how I play, but, when I was first released from the hospital, I was worried. My diabetes was diagnosed in May 1979, when I was a high school junior, and I had been looking forward to playing during my senior year. At first, my fears seemed to be coming true. Nothing I tried to do on the court happened the way I wanted it to. I guess I was hesitant. But, after about six games and a lot of help from my dad, I finally got my act together. My dad gave me the incentive to make the best of my condition. He said, 'Chuck, there are two things you can do: feel sorry for yourself because you have diabetes, or exercise hard, gain all of your weight back, and go out on the basketball court, giving it all you have.' I chose to give all I had to my games. It was the right decision." (Ray, 1980, p. 34)

Poliomyelitis. A viral infection that can result in the paralysis of body parts or systems, depending on the parts of the central nervous system attacked.

Rheumatic fever. A disease characterized by fever, inflammation, and pain around the joints and inflammation of the muscle and valves of the heart.

Spina bifida. An anomaly characterized by a defect in the bone that encases the spinal cord.

Traumatic injuries. Impairments that result from accidents. They encompass a great variety of conditions, including amputations, paralyses, and limitations of body function.

Friedman and MacQueen (1971) attempted to identify from among the 45,000 children in six Iowa counties those whose physical impairments had educational and psychological relevance. They found that approximately four children out of 1,000 had such conditions. We have no exactly comparable data on the total number of children with medically significant physical impairments. We estimate that for every 20 children with medically significant conditions, perhaps four or five of them will be in need of special educational programming of some kind.

Volunteer Agencies

Teachers and principals can get information and help from two kinds of organized volunteer groups. One is comprised of interested citizens whose objective is to assure that proper health, education, and social services are readily available. The second kind of organized volunteer group is made up of handicapped persons themselves.

Citizen groups act as advocates to assure appropriate services.

Citizen groups include such organizations as the Muscular Dystrophy Association of America, National Easter Seal Society for Crippled Children and Adults, National Epilepsy League, National Foundation–March of Dimes, and United Cerebral Palsy Associations. They distribute suggestions for teachers and other professionals who work directly with handicapped children. They offer counsel to parents. Some distribute curriculum materials for use in regular grades to help all pupils understand impairments and to be at ease with their exceptional classmates.

Volunteer groups of physically handicapped persons do similar things, but they also have thrusts of their own. During one month, for example, a local chapter of Open Doors for the Handicapped conducted the following activities:

- Held a meeting of its subcommittee on barrier free design.
- Sent a delegation to the annual state meeting of the Governor's Committee on Employment of the Handicapped.
- Announced its intent to host the first of four regional meetings to identify major problem areas in providing opportunities for the handicapped.
- Took part in and invited local employers to join in a seminar on affirmative action, with particular emphasis on the regulation that "every Government

contractor must prepare and maintain an affirmative action program for the employment and advancement of qualified handicapped workers."

- Had 30 of its members attend a meeting with a representative of the Regional Office for Civil Rights, Department of Health, Education and Welfare, to learn in detail the implementation procedures for Section 504 of the Rehabilitation Act of 1973.
- Gave members information on a new mode of transportation, a pedestrian vehicle, that allows a handicapped person in a wheelchair to load and unload himself unaided. A ramp is part of the machine. It travels over hard surface roads, on sidewalks, up and down inclines, and through gravel, sand, mud, and snow.
- Published editorial comments on the problems associated with being handicapped and a member of a racial minority.
- Published a note speculating that the wavy signature of Rhode Island Governor Steven Hopkins on the Declaration of Independence may have been because of cerebral palsy. On placing the deciding signature on the document he is reported to have said, "My hand may be shaky, but my heart is firm."

Self-help groups of handicapped persons grow in influence.

Citizen and self-help groups have three other activities in common. They vigorously advocate for all impaired children and adults. They encourage continuing education with respect to impairments for health, education, and welfare professionals. And finally, they press both government and private foundations to sponsor research aimed at preventing or ameliorating impairments.

Educational Considerations

Conglomerate classes of physically and health impaired pupils do not make educational sense.

There is no justification today for assembling children with crippling and health impairments into one group for schooling. Actually, no more heterogeneous array of pupils could be found, educationally speaking. And the special help they need is usually more portable than the children.

Mullins (1971), one of the first to call attention to the great within-group differences, spoke of "untenable groupings." She said:

> Many teachers have reported an I.Q. range of over one hundred points in their classes. It is not unusual to find a gifted child with muscular dystrophy sitting next to a cerebral palsied child with unmeasured intelligence or vice versa. In the same class there may be children with communication problems such as blindness or deafness who may also be physically handicapped. There will often be one so-called "brain-damaged wall-climber." The age range of such a class may extend from pre-puberty through adolescence. (p. 15)

She pointed out that "the best teachers cannot supply the kind of group cohesiveness and peer motivation essential to social learning in such a heterogeneous class" (p. 15), and called the teacher's task of individualized modification of methods, curriculum, and materials "gargantuan."

Noneducational considerations initially brought such youngsters together in special classes. First, many needed to be transported if they were to attend school at all. It was more convenient and economical to transport them all to one central place. Second, many required frequent and intensive occupational, physical, and speech therapy, as well as medical consultation and nursing and dietary supervision. It proved more feasible to group those therapies and related health services in one place and to bring the pupils to them. Third, many of these pupils could not manage stairs, and many used mobility aids such as crutches, walkers, and wheelchairs. To design and construct one school building to accommodate those factors seemed far less difficult than to make all existing and future school buildings barrier free. So transportation, health related care, and architectural accessibility were the factors responsible for the original tendency to cluster crippled and other health impaired pupils in their own special schools or classes.

Even with special transportation and facilities it was not feasible to move some children. Self-evident examples were those in traction or iron lungs. Also, there were always some children who could be accommodated in their local schools with modest adaptations. By the late 1940's it had become customary to speak of a need for a spectrum of six types of school settings essential for adequate educational opportunity for physically and health impaired pupils. These include:

1. *Regular class* attendance for pupils who can do the work of the regular school if minor adjustments in such things as seating, scheduling, and instructional materials can be made.
2. *Special day classes in regular schools* for pupils who can attend a regular school but who need a specialist to teach them all or most of the day.
3. *Special day schools* for pupils who need a school building and equipment totally adjusted to their needs.
4. *Homebound instruction* for pupils who must remain at home (either in bed or with extremely limited activity) for periods of time long enough to interfere seriously with their education unless special teaching is brought to them at home.
5. *Hospital instruction* for pupils who must be hospitalized for medical treatment on a 24-hour-per-day basis for a long enough period of time to

Compare this spectrum with today's new cascade (p. 47).

Under Public Law 94–142, "orthopedically impaired" means a severe orthopedic impairment which adversely affects a child's educational performance. Included are impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.) or impairment from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures).

"Other health impaired" means limited strength, vitality, or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophelia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

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constitute a major interruption in education, and yet who are well enough to receive instruction.

6. *Residential schools* for pupils who are undergoing long-term convalescence or rehabilitation that necessitates living in a specialized setting adapted for that purpose.

These arrangements are still important. All have been changing in one significant way, however, since the 1940's. They have moved into closer contact with regular education.

General group characteristics changed significantly.

There have been abrupt fluctuations in the nature of the physically and health impaired population. When special schooling of this kind began, for example, it catered to pupils with "lowered vitality." Improved nutrition, the almost complete abolition of childhood tuberculosis, and surgical procedures that effectively repair heart anomalies in the first few months of life are the kinds of influences that brought marked changes in the proportions of such pupils. At one time, the most common of the crippling conditions was poliomyelitis. Vaccines sharply reduced its incidence. At the same time cerebral palsy, which leaves children with much more complex educational problems than polio did, has come to the forefront as the most prevalent crippling condition seen in special education programs.

Today's education for children who are physically impaired and who have health problems is projected, therefore, against four main considerations.

First, it is an "artificial" grouping of children, educationally speaking. No common threads of special instructional needs provide a rationale for bringing them together.

Flexibility is a key requirement.

Second, a spectrum of school settings is needed for these pupils, ranging from extraschool situations like the home or the hospital through various levels of integration within the orbit of the schools.

Third, there is a growing trend to move physically and health impaired pupils into their local schools for all their education, special or regular.

Fourth, the pupil population characteristics have changed markedly, largely in relation to changes in health care, though some (the inclusion, for example, of conditions of pregnancy and child abuse) also reflect modifications in social attitudes and behavior.

This amalgam of background educational considerations, when joined with legal, medical, and social welfare factors, poses a formidable set of educational challenges. The remainder of this chapter shows how principals, teachers, and the specialists who work with them are responding to those challenges. Examples from elementary, intermediate, and secondary schools are also cited.

Mainstreaming

Lisa Blumberg was born with cerebral palsy. She tells how it affected her education and she makes recommendations for teaching exceptional students.

The Case for Integrated Schooling[3]

☐Although I have an obvious and, in some respects, limiting physical disability as a result of having been born with cerebral palsy, I have always attended schools with nondisabled students. Through six years in public schools, private schools in two different locations, and college, I have had good times and bad times, but I have always been glad that I have been in regular schools. I feel that I benefited academically, emotionally and socially from having gone to regular schools rather than to special ones.

The impaired child and the regular school deserve the chance to test each other's limits.

One of the biggest decisions parents of a child with a physical or sensory disability will ever have to make is deciding on the type of schooling their child should have. Because disabled children are individuals with individual needs, it is ridiculous to think that there is one universally correct decision. There are, no doubt, some physically or sensorially disabled children for whom special schools may indeed be the best answer. However, I think that too often children who should be in regular schools and would do well there are sent to special schools for reasons that are ill-founded or unjustified.

Mechanical Problems Solvable

Often the roadblocks that seem to stand in the way of a disabled child attending a regular school are not real or can, with a little ingenuity, be circumvented. A child who does not write legibly can do his written work on a typewriter. A child who walks very slowly should be able to arrange to leave each class two minutes early so he can get to the next one on time. Recently, I heard about a girl with polio who was discouraged from going to the neighborhood school because there were three steps down to the cafeteria and she could not manage steps unassisted. Apparently, it did not occur to anyone that another student could help her down those three steps or, alternatively, if worse came to worse, she could eat lunch in a classroom.

Imagination plus common sense solves problems.

I also know of an instance where a deaf student was advised not to apply to a full-fledged college despite the fact that she had always done well in school. This was because she could not take notes in class since she read lips; when she put her head down to write, she would not be able to see what the instructor was saying. Three solutions to her problem immediately come to my mind. First, she could copy another person's notes after class. Second, she could provide someone with carbon paper so that their notes could be automatically duplicated for her. Third, and perhaps this is the best solution since it lets her be completely independent, she could just jot down topic sentences and then immediately after class write down everything else of importance that she remembered. This, after all, is what many psychologists and social workers do who must keep detailed records on their patients and yet do not want to write in front of them. I say all this only to show that in so many cases, all it takes is a little thought or inventiveness to solve the mechanical problems presented by a disability.

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Teasing

Dealing with teasing is part of growing up.

Parents may be hesitant about sending their child to a regular school for fear that the other children will ridicule him for his disability. From my experience, I can say this fear is basically unfounded. In elementary school, for example, my classmates were all surprisingly accepting of me and I had many friends. My disability was, in fact, rarely mentioned to me by children who knew me. When it was mentioned, it was virtually always just a matter-of-fact acknowledgement of it rather than any expression of hostility towards me. Like most children, I was sometimes teased but usually this teasing was only a gesture of friendliness. I would have felt left out if I had not received it. Also, the things kids teased me about were almost always unrelated to my disability. For example, in sixth grade kids used to make fun of me because I would not tell anyone my middle name.

I cannot truthfully say that all through school I have always been "just part of the gang." In my high school years especially, I think my disability did put some distance between my classmates and me although this was no doubt partly due to my growing awareness of myself and my disability. However, although many of my relationships have been more superficial than I would have liked, for the most part I have gotten along well with people in school.

Helpful Friends

The benefits of friendship are mutual.

I have found that the others in the class are usually willing to offer at least minimal assistance to a disabled student. My friends have always helped me in countless small ways. In high school, for example, someone normally carried my books for me when we changed classes because I could go up and down stairs more easily and get to my next class faster if I was not carting along a load of books. The one thing that a disabled student should remember is to ask different people for help rather than the same one over and over so that nobody is ever unfairly burdened.

Therapy at School?

Therapy and schooling need not interfere with each other.

One reason advanced for making use of special schools is that the child will be able to receive various kinds of therapy there for his disability. However, this therapy takes place during the school day so that the amount of academic time a child receives is less than he would receive in a regular school. This, if nothing else, puts the child in a special school at an educational disadvantage. I am not knocking the value of therapy but I think parents should look for it elsewhere than at school. When I was younger, I received speech, physical and occupational therapy weekly at an orthopedic hospital. Sometimes I did have to leave school half an hour early to get to it, but this cut into my school time was minimal.

I think that sometimes the most therapeutic thing, at least for a physically disabled child, is to be confronted with real life situations. Today, stairs are absolutely no problem for me. As long as there is a railing, I can go up and

> *"Your first goal should be to promote the acceptance of handicapped children as individuals, more like than unlike other children, and to encourage their participation in regular group activities.*
>
> *"Explain the nature of certain limitations to all students and encourage them to probe these handicaps with perceptive questions. Whenever possible, have students try to imagine themselves in a handicapped child's place. Would they like to feel isolated? Inferior? As you are trying to improve attitudes, present children with facts. Talk openly about the causes of some of these handicaps. Point out the aids [that are] available.... Disabled children do have abilities. Emphasize what they* can do.*" (Pieper, 1974, p. 128)*

down flight after flight without thinking twice about it. This is because I have always been in places where I have had constant practice with them. At first, in school, I needed other people to help me manage stairs. But then, as I gained more experience, I became able to go up and down them by myself. I can almost guarantee, however, that if I had gone to special schools that were only on one level and had had my experience with stairs confined to the model steps in a physical therapy room and to the old tried and true stairs at home, I would not have gone up and down stairs unassisted to this day.

Real world experiences teach independence.

Teacher Assumptions

A child with a disability in a regular class will probably be categorized by the teacher as a disabled child. However, the teacher will probably make no assumptions about the class as a whole. When he or she is teaching the group, the disabled child in the class will receive instruction unclouded by any prejudice the teacher has against the disabled. As long as the teacher is speaking to the whole group, the disabled child will, in effect, be treated as a "normal" child, and this is all to the good. In a special school, on the other hand, the teacher will see the entire class as "handicapped," "special," "disabled" or whatever he or she chooses to call them. Even a relatively broad-minded teacher will have some assumptions, be they positive or negative, about the disabled and will teach the class accordingly.

Beware of stereotyping.

In other words, a disabled child in a special class will be receiving instruction geared to disabled children, based on the premises the teacher has about them. It may be thought that those who work with people with disabilities are far less prejudiced against such people than most people, but from my experience, this is manifestly not so. Many teachers who have never had a noticeably disabled person in the classroom before have treated me as far more of an individual than have many of the therapists with whom I have come in contact. (Of course, stereotyping the nondisabled who work with the disabled is as wrong and as narrow-minded as stereotyping the disabled. I do know of therapists and special educators who are sincere in what they are doing and have enlightened views about the disabled.) Thus, parents should be aware that a disabled child in a regular school may in fact be less a victim of categorization than a disabled child in a special school.

Playing with Friends

Full membership in the neighborhood ecology is basic.

For younger children especially, friendship with the other children in the neighborhood is extremely important. A disabled child will far more likely be accepted in the neighborhood play group if he attends the same school or at least the same type of school as the other children. He will less likely be seen, both by others and by himself, as overwhelmingly different if he has a bond of commonality with them. Contacts and familiarity in school will help in socialization after school. As a child, most of my friends' talk revolved around school happenings. If I had gone to a special school, I would have been barred from most of these conversations. Sending a disabled child to a special school creates a further distinction between him and the neighborhood children. Also, since a child usually must travel some distance to a special school, he may get home later than the other children and simply not have time to play with them. If the neighborhood children do not know him or only see him very infrequently, they may indeed be hostile towards him.

Fear of the Unknown

It is human nature that people tend to fear or be suspicious of types of people with whom they do not have frequent interaction. A disabled child in a special school is surrounded by other disabled children. He may come to fear children who do not have disabilities because of his limited contact with them. Brush encounters with nondisabled children may only serve to reinforce this feeling. Fear is apt to communicate itself. When nondisabled children perceive that a disabled child fears them, they are apt to be hostile toward him, and so a vicious circle is begun.

Career education, started early, can dispel fear and build confidence.

Unless a person with a disability is expected to lead an unbelievably narrow life—working in sheltered workshops, having only disabled friends, etc.—he will at some time or other have to start dealing with the nondisabled world. It will be much easier for him to start dealing with it in early childhood than later on when fear and self-consciousness may have built up. I am sure that many people who have gone to special schools make the transition from a disabled world to the nondisabled world very smoothly, but countless others may never make this transition successfully. Also, if a person has gone to a special school, he may wrongly believe that he cannot function in the nondisabled world. I think this is a real psychological danger of special schooling.

Beneficial to All

The disabled child is not the only one who benefits when he attends a regular school. Nondisabled children will be far less likely to build up misconceptions about the disabled if they have them as classmates. People who have gone to school with a visibly disabled person and who have seen him experience much of what they have experienced and seen him respond to things in almost exactly the same way as they have will be far less prejudiced than someone who has never had real contact with anyone disabled.

The benefits are mutual.

Many of my college friends tell me that they were uneasy with me when they first met me. I resent this, but I cannot really blame them because I am the first person with an obvious physical disability most of them have ever known. It is no wonder that they are at first as unsure of my reactions as they would be of a Martian's. However, if throughout school they had had one or two disabled children in their classes, I think they would have been far more comfortable in relating to me or any other disabled person.

Exposing nondisabled children to children with physical or sensory disabilities can only make them more accepting of all kinds of people. It will provide them with living proof that people with limitations in some areas do have talents and abilities. I think that prejudice against the disabled will only begin to be eliminated when significant numbers of disabled children go to school side by side with nondisabled children.

I am glad I have attended regular schools. I believe that sending a disabled child to a regular school is good for the child, for the others in his class and, indirectly, for disabled people as a whole. It is the goal of many people to someday see persons with disabilities fully integrated into society. What better and more necessary place to start than in the schools? (Blumberg, 1973, pp. 15–17) ☐

Technology, Special Procedures, and Preferred Practices

In other chapters the material under these topics appears separately. Prevailing practices are listed, paralleled by alternative preferred practices. Technology and special procedures occupy their own space.

The status of special education for children with crippling and health disabilities does not lend itself well to this format, due to the heterogeneity of the population and to their great variety of service needs, apart from education. (Service needs refer, for example, to health care and therapies, food, transportation, school furniture, personal hygiene, and social work. Two children may require virtually the same instruction and curriculum but differ greatly in their service requirements. The reverse may be true, too.) There are also so many ways in which both service and educational needs are being met that it is questionable if typical "prevailing" practices as such can be validly identified.

Typical practices vary greatly.

This section, therefore, consists of six principles that can aid in establishing whether or not a given practice is a preferred practice. Woven into the discussion of the six principles are examples of technology and special procedures. The section then concludes with applications of technology and special procedures in salient parts of the principal's and teacher's daily work.

Guiding Principles

The first principle: *All children should begin school in regular classes unless there are insurmountable transportation problems.* If transportation to a special school is feasible, it must also be feasible to a regular school. If the regular school presents architectural barriers, they should be removed. If attendant and aide services are needed by the pupil and are available in a special school or class, they should also be made available to the regular school in order to support the child's attendance there. In short, special education staff, facilities, and support services that make attendance feasible in a special school or class should be redeployed to make the same available in the regular class setting.

Adjust the program to meet changing needs.

Second: *Keep schooling a continuous and full time process adjusted in intensity to the child's vitality level and reaction speed.* If a child needs to be admitted to a hospital, education should follow the child. The criterion should be whether the child is able to receive instruction, not how long the hospital stay will be. The amount of teaching should be a joint decision of the physician and the specialist teacher. Also, when not under hospitalization and when not an emergency, therapies, medical examinations, and conferences involving the child should not interrupt the school day, but should be scheduled before or after school or on weekends. The slowed physical pace of many pupils causes their school program to move at a slower than typical rate. It should not be further decelerated by nonschool matters that can be arranged outside of regular school time.

Avoid overprotection.

Third: *Pupils should attain self regulation with regard to exertion and scheduling of activities.* Many of them, while still quite young, are required by their physical condition to husband their strength and to budget energy output. Others, while having as much sheer energy as any child, simply cannot move themselves with the speed and coordination that intact bodies and brimming energy banks allow for other pupils. It is preferred practice to give these youngsters opportunities to test themselves. The same reasonable monitoring any child needs—no more and no less—should apply for those with crippling and health impairments. All children should be guided to discover their own limits and the effects of their disabilities, if any exist, on their daily lives.

Fourth: *Organize educational programs in terms of pupils' educational needs; match both short- and long-range instructional designs to the pupils' own cognitive rates, their learning styles, and their present and projected educational achievements.* The only thing most physically and health impaired children have in common is a medical diagnosis. It tells little if anything about their educational abilities and requirements.

It is a violation of this principle to group children simply because they all need physical therapy. Decisions about each child's educational program

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Jack Cappa, a teacher and father of a son suffering spina bifida, said a cooperative school board and understanding parents and teachers have effected changes for handicapped children. One grade was moved from the second to the first floor, another grade was moved to a different building, and the library and music room have been moved downstairs. "These things have made our son a normal student. He's accepted," Cappa said. (Rosensweet, 1976, p. 9)

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should be made as though there were no crippling or health impairment present. Then, adjust the program and the local school setting until it takes into account any impairment the child has. Often that proves a less formidable task than first assumed.

Look for simple solutions first.

Local teachers and principals often invent practical solutions that cost little or nothing to implement. The impact of such solutions, though, can be immense. They can make it possible for children to live normally.

Fifth: *Make technology the servant of pupils and teachers.* Making this principle operational requires two actions. One is to assure that every technical aid of established value is available for use in regular schools by children who need them. If, for instance, a teacher concludes that a mechanical page turner or some adapted paper and paper holders are needed to make it feasible for a pupil to work in the regular class, those materials should be supplied by the school district. The specialist teacher should have up-to-date knowledge about relevant educational technology. That teacher, too, should have quick access to needed items, and should help the pupil and the regular class teacher become skilled in their use.

The second action needed to operationalize this principle goes further. Teachers must form cooperative relationships with engineers, psychologists, and other scientists who work at the interface of machines and people. To illustrate:[4]

> *A student at the University of the Pacific School of Pharmacy at Stockton, California, developed a device that made written communication possible for a girl who was unable to write for 12 years. [This device] allows 29-year-old Cass Moreland to activate a special typewriter by using the frontalis muscles in her forehead.*
>
> *Ms. Moreland, because of congenital cerebral palsy, is unable to speak, and uses a wheelchair. Previously, her only form of written communication was a special typewriter that she could activate with her shoulder muscles—until surgery in the early 1960's made this impossible. Despite these handicaps she completed high school and attended enough classes to be a sophomore at the local community college. However, her inability to write prevented her from going much further through college.*
>
> *The small box that Upjohn constructed amplifies the electrical activity from muscles responsible for the movement of the girl's eyebrows—via electrodes placed on her forehead with a band and wired to the box. This allows her to activate a switch and control panel and thus use the specially designed typewriter.*
>
> *For Ms. Moreland, the device is a slow process of written communication, but it does allow her to convey her thoughts in written form. "Cass has been able to adjust to the new device with a minimum of training time and now has a slow but viable method of communication," explained Upjohn. "This*

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[4] Adapted from U.S. Department of Health, Education and Welfare, 1976, pp. 11–12.

> *will allow her to complete her college education." (U.S. Department of Health, Education and Welfare, 1976, pp. 11–12)*

Certainly this is a highly complex writing assistance device. It may have limited generalizability. But it is right for Cass Moreland. She, with every other crippled or health impaired child or youth, has the right to as full an education as her cognitive reach will allow. It is sometimes necessary to go to extraordinary lengths to open channels through which full education may be delivered.

Technology, ingenious teachers, and helpful classmates bring even homebound pupils into close contact with regular school activities. Home–school telephone hookups became generally available in the early 1950's. The child at home is able to participate in class and teacher dialogues, listen and respond, and ask for attention by flashing a light on the in-class sender–receiver. Teachers adapt by talking about what they put on the chalkboard or about the visuals they use. Classmates carry the portable telephone apparatus from room to room and plug it in. Other classmates carry books and assignments to the child's home and back, thus maintaining a thread of direct social contact.

Sixth: *Provide expert educational assessment, instruction, and counseling all along the way.* This principle emphasizes the everyday working partnership principals and teachers should have with specialists. Because of the differences among pupils called crippled and health impaired, expertise in assessment, instruction, and counseling are not always found in the same consultant. Designing high quality schooling for a kindergarten child with slow cognitive development and muscular dystrophy is widely different from counseling and helping plan education for an 11th grade honor student and athletic star whose recent injury resulted in a permanent paralysis from the waist down.

The teacher should "quarterback" the consultation.

Top quality education, especially in the mainstream, calls for easy and direct access by principals and teachers to many different specialists. Some of these include:

Special education teachers
Speech clinicians
Social workers
School psychologists
Instructional supervisors
School principals
School counselors
Vocational rehabilitation counselors
Psychiatrists
Pediatric neurologists
Orthopedists
Occupational and physical therapists

Regular teachers who share instructional responsibility for crippled and health impaired pupils need to know what kinds of help are available from such specialists and need opportunities to work with them in collegial relationships.

Summary

Preferred practices that link with space-age technology are, by their nature, front-runners, well ahead of typical practices. Regular teachers and principals and their special education co-workers constantly make new, imaginative contributions to the characteristics of leading practices. In designing educational plans for exceptional pupils, it is the preferred practices that should set the standards.

The Role of the Regular Class Teacher, Special Teacher, and Principal

Teamwork with Specialists

Teamwork is essential if optimum education is to exist under either full or partial mainstream conditions. The common forms of teamwork are listed and illustrated here.

Teamwork facilitates mainstreaming.

Instructional Activities

The regular class teacher takes the lead in arranging instructional activities, with the specialist teacher a participating partner. Activities include assessment of educational needs; obtaining specialized instructional materials; designing the psychoeducational match that guides both what is taught and how it is taught; personalized instruction in tutoring, small group, or total class settings; developing instructional plans and schedules; helping select and train peer tutors and helpers; and guiding the work of employed aides and volunteers.

Service Activities

The special teacher and the principal ordinarily have chief responsibility for attending to service activities, though the regular teacher should take part in making plans and decisions. Some of these activities may best be delegated to aides and helpers, with teachers monitoring. Service activities include arranging pupil transportation; scheduling therapies; proper use and maintenance of braces, crutches, and wheelchairs; obtaining and maintaining special instruction-related equipment such as standing tables and page turners; and having special purpose ramps, handrails, and the like made and installed. The latter might be temporarily necessary, for instance, if the class is putting on a play and the stage needs adapting so a physically impaired pupil can take part in the production as an actor or as a stagehand.

At least half of excellence is attention to details.

Coordination

Under this heading comes the work of the special teacher in receiving pupil referrals from regular class teachers or others; processing such referrals; contacting community social and medical agencies; acting as a liaison with other regular or special schools regarding transfers, promotions, and other matters; participating in various staff meetings; and interfacing the pupil with vocational rehabilitation services. The special teacher and regular teacher relationship here is mainly one of maintaining an effective two-way flow of information between themselves and significant others. School social workers often play important roles in coordination, too.

Information is shared.

Record Keeping

The two-teacher team, as a joint activity, periodically updates in-class records of pupil plans and progress. Critical to this process is discussion and agreement on what should become part of the record. The same approach applies to the report card (or whatever other form the regular achievement report to parents takes) and to teachers' entries in the school and central office cumulative folders. Usually the regular class teacher has final responsibility for these items. The special teacher or school nurse records data concerning medicines, prescribed physical activity routines and limitations, and other medical information.

Parent Relations

It is advisable for the regular teacher and the special teacher to confer together with parents. That helps to assure accurate communication, and strengthens parents' resolve to follow through at home with school related procedures. Joint discussions with parents also help to open out-of-school social activities and recreation to physically and health impaired pupils, especially in cases where parents tend to be overprotective.

Parents should be partners.

Professional Development

Regular and special teachers and principals need joint inservice education sessions, particularly to practice the professional roles they have to play in real life. The regular teacher should expect the teamwork to extend to any children whose reactions to instruction are puzzling, not just to those who are identified as physically and health impaired. The specialist teacher's skills will be applicable to many, if not all, of the pupils the regular teacher has difficulty reaching alone. Thus, most of the special teacher's typical day will be spent in regular classes in cooperative assessment and instruction with regular teachers.

Any child may need some special education on occasion.

Individualization of Instruction

Assessment uncovers specific and general educational needs. Teachers should instruct in terms of the needs revealed. The tightness of the match between instruction and student needs, plus the thoroughness and skill with which teaching plans are executed, determine the quality of pupil attainments. Taken together, that is the definition of effective individualization of instruction.

Curriculum Individualization

Physically and health impaired pupils seldom need instruction outside the curriculum of all other pupils. Mullins (1971) highlighted that point vividly with an illustration of twin brothers, one with spina bifida, who have attended three grades together in their local school. The major portions of their curricula needed no substantive changes.

Some things, though, do call for adaptation or particular emphasis. Examples are the teaching of:

Adapt and adjust the regular curriculum.

- *Habits of planning.* Retracing one's route unnecessarily is too time and energy consuming for children and youth whose supply of those commodities is less than average.
- *Choosing the essentials.* Most pupils can carry along an additional book just in case it is found to be required later. Not so for pupils who need one or both hands to help with movement and who may already be carrying a heavy brace.
- *Mobility training.* All children have to learn how to travel with increasing independence. Special added instruction is required when only certain routes, buses, buildings, and streets are sufficiently barrier free to use and when weather changes pose extraordinary hazards.
- *Health habits.* Personal health takes on special meaning when functionally limiting impairments already exist. For example, brushing one's teeth, which for a young child may be a quickly performed task under adult pressure, can be an extremely complex and time consuming operation for a youngster whose arms and hands are impaired or missing. From the point of view of safety, pupils with diabetes need instruction in the prevention of coma. Epileptic pupils who are liable to seizures or to brief blank periods must have instruction in the management of those incidents.
- *Physical education and recreation.* Happily, physical educators themselves have long recognized the need for individual adaptations. They help pupils with physical and health impairments to acquire and maintain superior levels of general fitness through individualized programs termed *adaptive* physical education. Special attention spotlights body alignment, posture, and the adjustments needed to facilitate participation in recreational sports such as bowling, fishing, and golf.
- *Handwriting.* Some pupils with hand or coordination difficulties will attain competence in writing if templates and line guides are employed and if simpler and larger letters are substituted for those conventionally used.

Others may have to bypass handwriting altogether, except for learning a signature, and do all their writing on standard or modified typewriters.

The curriculum is more than academics

- *Socialization and self-development.* This part of the curriculum refers to what students learn in school about cooperation, respect for individual rights (both personal and property), consideration for others, their own strengths and weaknesses, and the generally accepted values of the child and adult worlds in which they live. These and related matters make up what some call the affective curriculum. The presence of physically and health impaired pupils among other pupils encourages social and personal considerations that can contribute to positive mental health for both.
- *Other curricular areas.* Vocal music may be extremely difficult for pupils with slowed speech and distorted articulation due to cerebral palsy. Studio arts may require adaptations in technique and media for pupils without the use of hands and arms. Playing wind instruments may be too dangerous for pupils with weak arterial walls or asthma. Chemistry experiments may have to be adapted for youngsters still learning how to manipulate objects by means of prostheses. Wood or metal shop machinery may require added safety devices and special signs and fixtures. Calculators may have to be supplied in mathematics classes. Relevant adjustments may need to be made in all other curricular components, too.

These examples show that adaptations must be personalized, whether in arithmetic and the language arts, in the social and natural sciences, in the health and physical development areas, or in the creative and performing arts. As a general rule, curricular adaptations ought to allow these pupils equivalent access to content and skills with other pupils of like levels and rates of cognitive development.

Instructional Materials

Special adaptions make materials usable.

Concern here is with arranging for the child to be able to use instructional materials with ease. A child in a wheelchair may have difficulty using the ordinary chalkboard, reaching the globe, or manipulating a large dictionary. Some need stands for textbooks, plus mechanical page turners. As part of a physical therapy routine, some pupils may need to stand for a large part of the day. Others are faced with even more complicated problems.

Special instructional materials are not usually necessary. The challenge is to achieve a comfortable and efficient interface between the pupil and the material the pupil has to use. This calls for contrivances that bring those materials under the pupil's control. Many have already been invented, and special teachers are familiar with them.

Organization for Instruction

This means, quite literally, getting it all together—scheduling, pupil attention, correct materials in proper sequence, assignments of work to aides and volunteers—in an orderly way, so effectiveness of instruction is enhanced. (Its parallel in surgery is the preoperative check of all equipment, supplies, personnel, positioning, and patient condition before the crucial action starts.) And, as the situation changes, it calls for reorganization on the spot with minimal confusion or lost motion.

Established routines form the basis for effective organization.

On the average, a physically or health impaired pupil and associated special equipment require twice the floor space needed for an ordinary child. Changing a pupil's position can thus be a major undertaking. These and related considerations are prevented from becoming serious problems when regular teachers use their special teacher colleagues for advice on tactical management and when fellow pupils and aides or volunteers are prompted as to how they might help expedite such matters. Once routines are established it becomes possible, with little difficulty, to introduce flexible variations.

School Physical Plant

Many elementary and secondary schools, designed for typical pupils, effectively bar exceptional children. The same is true of most colleges, public or private. Moreover, well qualified teachers with physically limiting conditions are often excluded by the same architectural barriers. Neither can parents with physical and health impairments enter their nonhandicapped children's schools.

New construction, open to exceptional persons, is appearing. Remodeling is achieving the same result. Guides for architects and school planners now show the way to a barrier free environment.[5]

There is more to it than simply getting rid of built-in barriers. Birch and Johnstone (1975) proclaimed three themes for the physical plant of today and the future:

Space adjustments eliminate barriers.

> 1. Common architectural barriers to total building use by the handicapped can be eliminated.
> 2. Subtle space adjustments can be arranged to produce significant positive impacts on quality of teaching and learning.
> 3. School building design should maximize the opportunity for handicapped children to stay in the mainstream of education. (p. 9)

Within all teaching and learning spaces, teachers and principals can encourage and support common sense adjustments such as those described by Lisa Blumberg and Jake Cappa earlier in this chapter.

Summary

The individualization of instruction takes on added dimensions in the context of pupils with physical and health impairments. The optimum match between a pupil's needs and the pupil's prescribed educational plan can be achieved in full or partial mainstream programs if there is a sound partnership of principal and regular and special teachers, as well as appropriate consultation from other specialists.

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[5] Legal guidelines come from the U.S. Architectural and Transportation Barriers Compliance Board, Washington, D.C. 20201.

Illustrations of Effective School Programs

Research leads to practical programming guides.

A particularly illuminating investigation of inclusion was reported from England by Anderson (1973). This study involved 99 moderately and severely disabled children who were educated in "ordinary" primary schools. The first words of the first chapter of Anderson's book are: "No handicapped child should be sent to a special school who can be satisfactorily educated in an ordinary school." The study followed children with cerebral palsy, spina bifida, thalidomide deformities, hemophilia, and a variety of other disorders into the "ordinary" schools not just to test how well they were doing, but to seek guidance on how better program planning might proceed. The book-length report includes much detail on school, family, and community aspects of programming for the physically handicapped in regular schools.

General findings of the study can perhaps be summarized through a series of brief quotations from Anderson's concluding comments.

> There can be little doubt that the majority of the parents ... preferred ordinary school placement.... The amount and quality of social integration between handicapped and non-handicapped children both inside and outside of school was very encouraging.... Findings suggest that most children without neurological disorders are able to cope, emotionally, with the environment of an ordinary primary school.... It is not the physical handicap *per se* but the existence of learning disorders which is important.... Given special provisions of the kind I have described, it is possible to offer even severely handicapped children a satisfactory education in an ordinary school. Given imagination, backed up by expertise and by financial resources, it is possible to provide for children with additional specific learning difficulties without segregating them. (pp. 289, 290, 293, 297, 303)

Progress toward inclusion is steady.

Moves toward mainstreaming for physically and health impaired pupils have multiplied in the past three decades. School programs are at different stages of progress toward full social and scholastic integration of exceptional and regular pupils. The three American schools described in the following sections illustrate mainstreaming at different age and grade levels. Each has qualities that will interest principals, regular teachers, and their special educator colleagues.

In several places, special schools initially built for crippled children have opened enrollment to all children. Redistricting attendance areas, or creating "magnet school" conditions in erstwhile special education centers, maintains architectural and other design advantages while encouraging integration.

Preschool and Elementary Level

The Urbain Plavan School is in Fountain Valley, California.[*] It was designed for regular school pupils as well as those with cerebral palsy, polio, birth defects, accident-caused limb losses, and other physical and health impairing conditions. It opened in 1973, having been planned and built specifically to integrate orthopedically handicapped and typical children.

Because moving requires considerable effort for many handicapped children, the school was designed for maximum circulation efficiency. It is an irregular oval-shaped building. Four distinct elements surround and feed into a fifth element—an 8,100 square foot central learning center. The four elements are an administrative section, classrooms, a special services section, and a music platform and storage facility. The focus of the complex is inward. Eleven circulation paths lead to, through, and out of the learning center.

Space design allows full participation.

Although there are special service facilities to accommodate handicapped students, no real boundaries exist. Orthopedically handicapped and health impaired children participate in all regular activities.

Ninety-six handicapped pupils and 330 typical children, preschool through eighth grade, attend the school. Most are drawn from a "walk-in" area surrounding the site. Some of the orthopedically handicapped children are transported from four cooperating school districts. The staff includes ten regular teachers, eight teachers and eight teacher's aides for orthopedically handicapped children, two learning center coordinators and two aides, one teacher of educable mentally retarded children, and one speech and language therapist.

Special equipment in the school includes electric parallel bars, balance beam, rocking beam, rocking boat, walking rails, bicycle exerciser, foot placement ladder, triplex pulleys, punching bag, shoulder wheel, finger ladder, wrist roll, and a standing tilt table. There is also a training bedroom for daily living skill adaptation, a training bathroom, training kitchen, and hydrotherapy room.

The special services section of the school functions as a full-time clinic. Parents can bring children here for examinations, consultation, and therapy. A separate reception and waiting room with an outdoor play area serve these parents and children. (Adapted from Russo, 1975, pp. 18–21)

Parents receive clinic services.

The great majority of children with physical and health impairments flourish in regular classes in their neighborhood schools if consultation and necessary materials and services are supplied.

Some youngsters do need the more adaptive environment of a school like Urbain Plavan, at least for a time. For that reason, fully integrated special service schools are needed within easy distance of regular neighborhood schools.

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[*] Adapted from James R. Russo, "Are Your Facilities Suitable for Mainstreaming the Handicapped?", *The Education Digest*, XL (January 1975), 18-19.

Intermediate Level

Geraldine Lockard, a mathematics teacher at Andrew Jackson High School, Cambria Heights, New York, wrote this description[7] of her child's school experience as a personal testimony to the principal, the teachers, and the program of Rachel L. Carson Intermediate School (No. 237) in Flushing, New York. Her son, Gregory, a dwarf, entered the school one year after it was opened as a prototype for mainstreaming handicapped youngsters of all types.

☐Gregory, who is 31 inches tall and has other defects that prevent him from walking long distances unaided, was mainstreamed in mathematics, social studies, and English after preliminary evaluation and interviews. He took science and shop with other special education students. Gregory had not previously been allowed to attend classes with "regular" children, as he called them, and he was eager to see how well he could keep up. Despite some difficulty in English class because he has difficulty in writing as fast as the average child, Gregory managed to hold his own in all the classes to which he was assigned. This was remarkable, in view of the fact that he attended classes with students who had demonstrated special academic ability. The following year, his last year at the school, he was permitted to add Spanish, science, and shop to the other subjects he took with the academically talented students.

The teacher became Gregory's advocate.

His home room teacher, who had initially been fearful of the responsibility of having him in her class, became an ardent supporter of his activities. She submitted one of his book reports to the Queens Public Library journal, *Verdict,* and it was accepted for publication. She also recommended him for a scholarship to the League in Aid of Crippled Children. After an interview he received an award. In 1977 he was given a second award, which resulted in his meeting with Sidney Fields of the *New York Daily News.*

The bare recital of these facts gives no idea of the impact of the mainstreaming experience on my son. Before this experience, in the isolated orthopedic unit to which he had previously been assigned, he was rarely challenged intellectually. When tested for IQ at Johns Hopkins Hospital in 1969, he scored as low as 70 in certain areas. He developed no library skills, because children in the orthopedic unit had no access to the library and no special facilities of their own at that time.

Fortunately for Gregory, he did have some positive experiences before attending Rachel Carson. His teacher in the fifth and sixth grades came to the orthopedic unit from a normal sixth-grade situation and demanded that her students give their best effort. She brought curiosity and enthusiasm about the world—current events, sports, art. Geography and history became meaningful to her handicapped children. This teacher appreciated Gregory's creative ability and wild sense of humor. He responded with an interest, which has lasted, in social studies, sports, and current events. . . .

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[7] From *Phi Delta Kappan*, April 1978. Reprinted by permission.

After a year of home instruction necessitated by an operation, Gregory was placed in Intermediate School 237 by the Bureau for the Education of the Physically Handicapped. At first it was demanded that he attend school in a wheelchair. At home Gregory used a small bicycle with training wheels that served the dual purpose of giving independence in locomotion and forcing him to exercise his legs. Within a few weeks I could see that Gregory was lapsing into dependent, passive attitudes and was also losing the muscle tone in his legs, which we had spent so much time and effort in developing. I approached Mr. Solomon on Parents' Night and expressed my concern. The very next day Gregory was permitted to use his bicycle in school. He was a changed child almost immediately.

The principal was supportive.

Gregory's mode of locomotion captured the fancy of the other students and of the people who were assisting the handicapped students in the school. His only need for help was in the use of the elevator when changing floors, because he could not reach the elevator button. Instead of being an object of pity, he became a center of admiration. The ultimate acceptance was when he was invited to the park after school by his classmates to umpire a baseball game.

When Gregory graduated from Intermediate School 237, he walked across the stage unaided and received a tremendous round of applause.

As a consequence of his experiences at Rachel Carson, Gregory felt secure enough to request admission to a high school that had no special facilities for physically handicapped students. He had developed an interest in radio broadcasting and chose to attend August Martin High School, which has an exceptional program in that area. We visited the school and found the faculty and students to be very accepting toward Gregory.

Attending a regular school built Gregory's confidence.

Today Gregory is a senior at August Martin. He is sports editor of the *Martin Messenger* and plays in the school band. During his first year at the school he received an award for outstanding achievement in communications (radio). He has twice been selected to attend the summer program at the University of Buffalo, where he has studied creative sound and film making with other talented media students from New York State high schools.

Although he was unable to satisfy the typing requirement for media students with the manual typewriters at August Martin, he did learn to type on an electric typewriter through a typing-for-the-handicapped program at LaGuardia Community College.

Last year Gregory passed a college-level statistics course offered at his high school by York College for college credit, receiving an A in the course. Presently he plans to attend St. John's University in order to major in communications and athletic administration. He has high hopes of becoming a sportscaster.

Mainstreaming has given Gregory confidence that he can function in the real world. He is independent within his physical limitations and relates well to his peers. I have often been told and have observed that many students find his lack of self-pity and his ability to cope an inspiration to themselves. Gregory has learned to look after himself and to reach out for help when he needs it. We are all very proud of him. □

Secondary Level

Full integration for physically and health impaired pupils, plus individualized scholastic mainstreaming, has long been characteristic of Marshall-University High School in Minneapolis, Minnesota.[8] It represents a concept in which special education and support services are included in school rather than appended to it.

To the casual observer it is an ordinary city high school—large, an old but well kept building, with a student body from a variety of ethnic, racial, and socioeconomic backgrounds. Exceptional pupils, however, start each day in Marshall-University's regular report rooms. Their schedules parallel those of all other students. Elevators, hand rails, and similar aids are available. Teachers have at hand the special equipment and materials needed to accommodate individual pupil needs.

Support services are integrated into the regular school.

Physically handicapped high school students attend Marshall-University Junior and Senior High School when they require the specialized services of a combined education/health and medical support component not available at other West Metropolitan area high schools. Health/medical support services include hydraulic lift bus transportation to and from school, use of the building elevator to reduce fatigue and/or to eliminate stair walking, and the aid (for daily living activities) of two licensed practical nurses supervised by a certified school nurse.

Exceptional students are integrated with the rest of the student body for general education academic subjects. Two resource teachers work with the students and general education teachers to ensure that the students understand and fulfill course requirements and the expectations of their instructors. Course modifications are instituted only as required by the needs of individual students. Students whose physical conditions call for major course modifications may take as substitute courses: Adaptive Physical Education, Adaptive Typing and Business Skills, Adaptive Industrial Arts, and Adaptive Foods.

Work orientation is stressed.

Marshall provides courses in work orientation, attitudes, and prework skills. Work placements within the school are available to some students while others participate in work experience outside of school. Work orientation is an essential component of the school program for physically handicapped students. The amount of student involvement is determined on an individual basis, as a number of students are college bound and require a full program of academic instruction.

The Division of Vocational Rehabilitation (DVR) initiates individual casework services during the junior year, with definite plans and responsibilities determined before the conclusion of the senior year. The DVR Coordinator then continues to assist students in pursuing suitable vocational/educational goals until employment is located.

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[8] This description was developed from material kindly supplied by J. H. Bisek.

Other physically handicapped junior and senior high school aged students who do not attend Marshall because they are capable of full participation in their home schools with special educational programming may be involved in one of the prevocational or vocational training programs available in the West Metropolitan area.

The Marshall-University High School format for integration is also applicable to preschool, elementary, and middle school settings.

Summary

The trend toward accommodation grows.

The spectrum of educational settings described earlier is still necessary for balanced programs. It is plain, however, that advances in social and educational philosophy and technology are moving the fulcrum so that more weight is directed toward bringing needed special education and services to exceptional children while they remain in regular class groups.

Current Trends

Education for physically and health impaired pupils has to be seen as one important part of a complex of developmental support systems aimed at maximum normalization. Obvious other parts are those that deal with health services, home and family living, religion, social services, vocationally oriented training, and recreation.

To be sure, these are interactive systems. Education overlaps to some extent with each of them and each overlaps with the other. And they should support each other. But it is essential that teachers and administrators recognize and impress on others the following two principles that follow current national trends.

Health funds should support health services.

First, educators and education cannot justify expending significant amounts of funds and staff time on matters other than education as such. This means, for example, that funds for physicians, nurses, therapists, and other health services should come from health sources, even though they are provided to school children in school settings. When teachers go into hospitals to work with children, they are usually paid by school systems from education funds. When physicians and other health professionals work in schools, the support should come from health funds. There is too little financial support for schooling as it is to allow some of it to be expended for other purposes, however worthy.

Maximum instructional time is needed.

Second, school time should be devoted to schooling. With most children, teachers have too little time to cover all the instruction that is needed, so no time should be given up to nonschool activities. This principle translates into moving therapy time, for instance, into what is normally out-of-school time. The same is true for pupil medical diagnosis, family counseling, recreation, and other activities that often impinge on the time teachers have with their physically and health impaired pupils.

Comprehensive programming is necessary. Teachers must help to see that it happens, but not at the price of shortchanging education. What is needed is balance.

What Every School with Physically and Health Impaired Pupils Should Have

Use the checklist to assess the school's readiness for accommodation.

The purpose of supplying this checklist is to assist principals and teachers to prepare their schools to accommodate physically and health impaired pupils. Contrary to popular belief it is not necessary that the school be converted to resemble a hospital. In reality, the accessibility requirements established for all public buildings now are, in themselves, almost sufficient to meet pupil needs.

The particular arrangements for a specific school, of course, will have to be worked out in detail. But use of this checklist is a good first step.

Personnel

☐ Teacher-consultant(s) qualified to supply the special education the pupils need.
☐ Regular administration and staff oriented to work with physically and health impaired pupils.
☐ Pupil personnel staff (counselor, nurse, social worker, psychologist) prepared to work with those children, and access to specialist consultation as needed.
☐ Service staff on school (secretarial, food services, custodial) acquainted with and prepared for special considerations these students may need.
☐ Volunteers and aides trained to assist teachers and special students.
☐ Staff on call or on hand for special service requirements of these pupils, as needed.

Pupils

☐ Student body oriented to physically and health impaired pupils.
☐ System in place for "buddy" activities and other peer interactions throughout the school.
☐ Pupil-specific materials and equipment available (page-turners, standing tables, communication boards, etc.).

Facilities and Arrangements

☐ Accessible drinking fountains, toilets, lavatories, and the like.
☐ Evacuation safety procedures and personnel in place.
☐ Space and adjustment to allow essential mobility.
☐ Parking and storage for mobility and other equipment.
☐ Transportation as needed.
☐ Medication responsibilities, storage, and procedures clear.

Continuing Education

☐ Periodic inservice update for faculty and support staff.
☐ Orientation on call for new or substitute personnel.

The Continuing Need for Teachers

Possible roles continue to expand for teachers who understand physically and health impaired persons. Regular class teachers who have basic knowledge about special education can expect to find employment opportunities on the increase as the wave of mainstreaming spreads.

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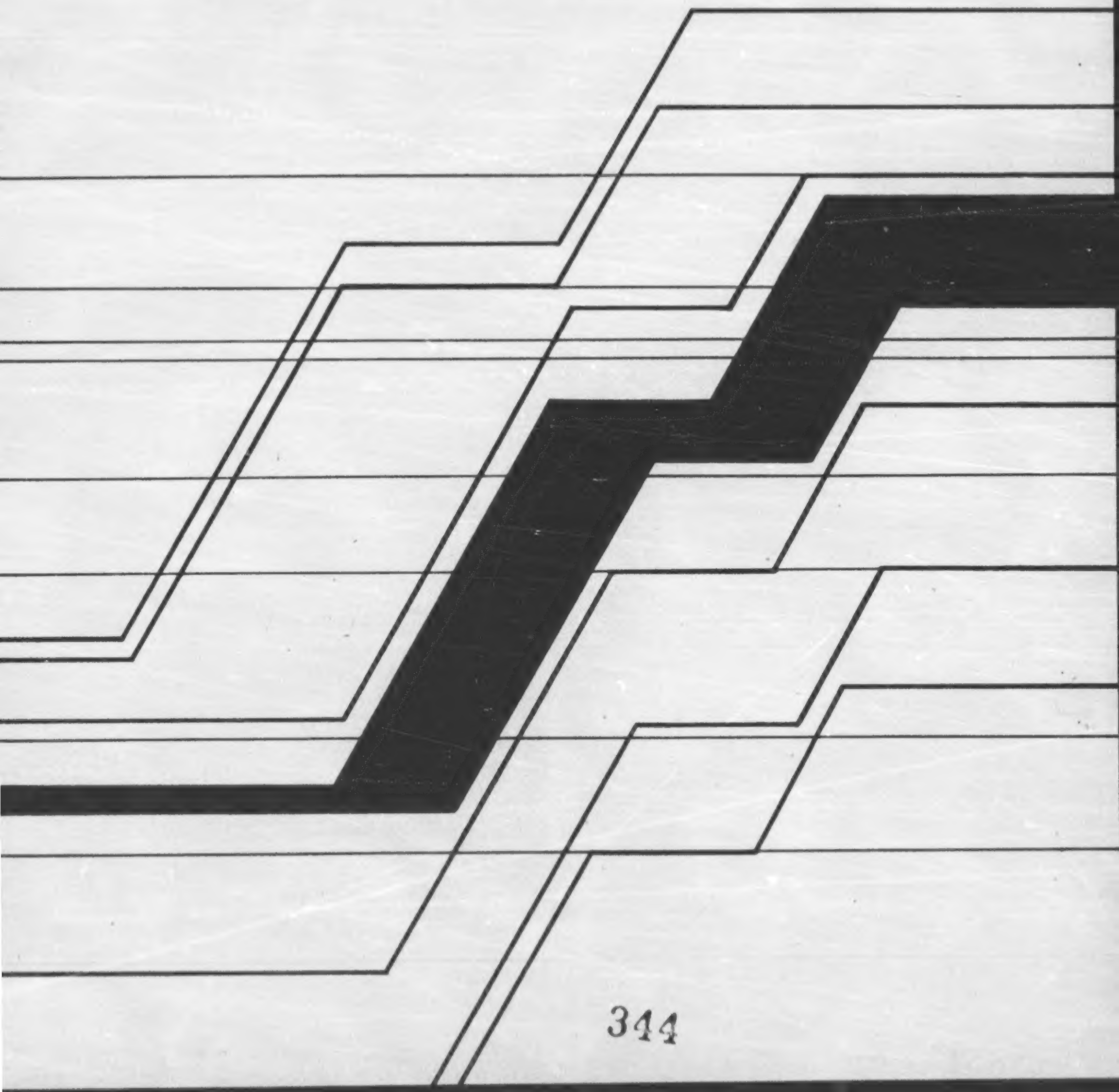
CHAPTER 10

Speech and Language Impairments



Chapter Outline

- The Challenge to Educators
  - Health and Social Welfare Considerations
    - A Personal Perspective
  - Educational Considerations
  - Mainstreaming

- Technology and Special Procedures
  - Definitions
  - Divisions of Speech and Language Work
  - Procedures with Articulation Defects
  - Procedures with Voice Problems
  - Procedures with Stuttering
  - Procedures with Developmental Delay

- Prevailing Versus Preferred Practices

- Illustration of an Effective School Program

- Current Trends

- The Role of the Regular Class Teacher, Clinician, and Principal

- Summary
  - What Every School with Speech and Language Impaired Pupils Should Have

- Topical Bibliography

The Challenge to Educators

Speaking is so fundamental for most people that they seldom think about it. But for persons without clear, pleasant sounding, unhesitant speech, talking can be an exercise in agony.

Left unattended, early speech problems can leave social and emotional scars.

> The other boys in school used to call me "stuttercat" and imitate me whenever I came to school. At first I always managed to be tardy and to stay after school to avoid them, but my folks got after me and then I began to fight with them. I got to be a pretty good fighter, but the bigger boys licked me and the teacher punished me when I hit the girls. I still hate girls. (Van Riper, 1963, pp. 41–42)
>
> Even when I was a little girl I remember being ashamed of my speech. And every time I opened my mouth I shamed my mother. I can't tell you how awful I felt. If I talked, I did wrong. It was that simple. I kept thinking I must be awful bad to have to talk like that. I remember praying to God and asking him to forgive me for whatever it was I must have done. I remember trying hard to remember what it was, and not being able to find it. (Van Riper, 1978, p. 61)

Problems of language and speech appear in approximately 1 out of 20 children. They occur with little regard to socioeconomic condition, family, sex, race, rate of cognitive development, or the presence of other exceptionalities. They have potentially devastating personal, social, and academic consequences. Those facts make the prevention and correction of speech problems one of education's major challenges.

Health and Social Welfare Considerations

Professionals who concentrate on speech and language problems have developed a point of view, a terminology, and a place for themselves among the "helping professions." They maintain a close alliance with dentists and physicians because some of the more complex speech problems are linked with medical and dental conditions. As will be shown, however, their closest relationship is with the education professions.

A small but complex group of speech problems have physiological bases.

The great majority of speech and language problems are developmental and are not tied to physiological abnormalities. This is the place, however, to describe briefly the four major kinds of medically connected speech problems that teachers may find themselves working with in collaboration with speech and language clinicians in elementary and secondary schools.[1]

Central nervous system (brain) damage. Injury to the brain before or after birth, from whatever cause (accident, stroke, tumor, illness), can reduce the capability to produce intelligible language and speech, even though the ability to think may not be appreciably impaired. The ability to understand the speech of others may be absent or limited, too, from the same presumed cause. Childhood or developmental aphasia are expressions sometimes used to denote such language and speech problems.

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[1] Other serious speech and language deficiencies are connected with hearing impairments, learning disabilities, and with mental retardation, certain mental illnesses, and certain physical impairments. These are taken up in other chapters.

Cerebral palsy speech. This faulty, slow, slurred, and difficult to understand speech is associated with the poor voluntary control of muscles characteristic of persons with cerebral palsy. There is no set pattern of speech disparities. It is related to the particular form and degree of the cerebral palsy, and that varies from person to person.

Corrective work, begun early, produces marked improvement.

Cleft palate and/or lip speech. Some babies are born with a split in the roof of the mouth and/or the upper lip, leaving an opening between the mouth and the nasal cavity. Sometimes in this deformity the gap extends to the soft palate, which may be divided or missing. The difficulty in closing the nasal and oral cavities from each other during speech makes the formation of certain speech sounds, such as /v/, /t/, or /f/ particularly difficult, even following high quality surgical repair of the cleft plus remedial speech work. Dental abnormalities of teeth and gums likewise complicate articulation. Since 99% of these children have middle ear disease in the early preschool years, patterns of fluctuating hearing loss are frequently found. That, too, can inhibit learning correct articulation and can slow down or delay language development.

Deformities. Occasionally children are born with other deformities of the mouth, nose, tongue, or throat, or such deformities may result from accidents or from surgery necessary to correct other conditions. A consequence may be difficulty in producing certain speech sounds because of the structural changes in the speech organs.

These four medical and dental-related speech problems are difficult to improve or correct. Fortunately, they are also among the least frequent of all speech problems. None of them has a "typical" form, despite some common qualities. Individually designed corrective work by speech specialists often produces marked improvement, especially when started early in life.

A Personal Perspective

Family effects are important to consider.

The following account[2] of the first two years of Ben's life, as told by his father, highlights the human stresses that accompany physiologically based speech and language anomalies. Some things to think about while reading this true story:

What will happen when Ben starts to school?

How soon and in what ways should school personnel get involved with Ben and his family?

What parts should the principal, the teacher, and the speech and language clinician play?

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[2] Adapted from Paris, 1981. Reprinted by permission.

□The first sight of one's own child is one of life's most memorable moments. In Ben's case, that was doubly, triply true. . . . He had a cleft lip and cleft plate. Holding him for the first time and looking through tears at those badly twisted features, I couldn't suppress the shock and despair. . . .

An endless series of operations ahead. The possibility of mental retardation. Probable hearing loss and major dental problems. Guaranteed speech defects, and all sorts of social and self-image difficulties. Financial disaster for sure.

A full-scale tragedy.

But shock wears off, and guilt and despair finally subside once you recognize their stupidity. . . . Ben's sister had the right idea. Free, like all 4 year olds, from the bleeding stigmata of preconceptions, she took her first look at her. . .day-old brother through the hospital glass and said, "Why doesn't he have any hair?" Then added, as an offhand afterthought, "His lip touches his nose."

Young siblings are free from adult preconceptions.

Cleft lip and palate are the most common of the so-called serious birth defects. Yet the collective wisdom of the medical profession still can't explain why they occur. What is known is that all fetuses start out with bilateral clefts—no separation between the nose and mouth on either side. But by the seventh week of pregnancy, the tissue between nose and mouth comes together to form the upper lip and the normal "mustache" area between the two. By the ninth week, the roof of the mouth—the hard palate—and the soft palate behind it close up.

Except in cleft children. Their lip and nose do not separate properly on one or both sides. The palate is literally "cleft" in two parts, with a gaping hole instead of a closed inverted cup-shaped roof of the mouth. A cleft palate hinders swallowing and speech, since the muscles of the soft palate and a closed-off roof of the mouth (for suction) are essential to forming correct sounds. Lip and palate clefts do not always go together—but they most often do.

A series of fairly simple reflex tests soon established that we wouldn't have to worry about Ben's brain. Instead, we could worry about all the surgery required to fix up [his] features. . . . Even if you trust your surgeon implicitly, when your child faces a minimum of four and a maximum of perhaps eight major operations, there is only one way to deal with the prospect. That is by adapting the Alcoholics Anonymous creed of accepting the things you cannot change and taking the surgical hurdles one operation at a time. Still, no matter how well prepared you might be, there are few more upsetting sights than seeing them wheel your infant off to the operating room.

Surgery can be upsetting for parents.

He'll also have to concentrate on learning to speak properly, by means of hilarious alphabetical drills conducted by his parents and big sister. Speech progress to date has been often humorous, sometimes frustrating but generally remarkable. The vowels come out loud and clear. The consonants come out just loud—generic consonants, mostly indistinguishable one from another. Thus, for example, "Ih ow, ayey" translates—to the Ben-trained ear—as "Sit down, Daddy." But he keeps trying, and lately his *m*'s, *n*'s, *r*'s and *l*'s have been sounding the way they're supposed to.

The fourth and most recent operation is responsible for much of this progress. In it, the actual reconstruction of the palate took place and the hole—reduced by natural growth to about half an inch—was sewn shut.

Speech correction is a necessary followup.

The child's speaking equipment, then, is now more or less in shape. He just has to figure out how to use it and change the ways of a "lazy" tongue that has grown used to compensating in strange ways for the cleft. Often, when he rattles on excitedly about something, it is necessary to call in the outside interpreter—either his sister or his faithful young governess Megan—who understands (or pretends to) more of what he says than the old fogies. But more often, he is happy to repeat himself ad infinitum, with elaborate gestures and nonverbal cues, until a sufficient measure of his meaning is communicated—like any non-cleft 2 year old.

And then there are the teeth. They go every which way. . . . More operations will probably be needed for that. But, as his second year draws to completion, it seems a relatively small thing. At 35 pounds, Ben himself is—by contrast—not at all a small thing. He's a rollicking, boisterous tornado of a little boy. A daredevil and a clown, he is impervious to the falls and bruises that reduce most kids his age to torrential tears. Perhaps, as one friend suggests, that's because he knows from his hospital stints what *real* pain is. The minor slings and arrows of daily accidents hardly faze him. . . .

Funny, but we misplaced the tragedy somewhere along the line. I think it was round about the time we stopped feeling sorry for ourselves. As for the child, he never had any tragic outlook to shed. He seemed to know better from the beginning, and his own joyous approach to life was infectious. . . . Happy birthday, Ben. (Adapted from Paris, 1981) ☐

Educational Considerations

Most speech problems do not have a physical base. They are developmental. They respond to preventive and remedial teaching.

Speech is part of language arts.

The improvement of speech is an important goal of elementary, secondary, and higher education. The vocational implications of effective speech today, from actor or lawyer to senator or sportscaster, are plain. The personal and social values of good speech in conversation and discussion are evident, whether in the family, among friends, or in the community. Today's culture

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What does being "part of the language arts" really mean? One teacher commented, "I don't feel that correcting a child's speech deviation, when I know he can produce the sounds clearly, is any different from correcting a child who says ain't.*" Another said, "Speech and grammar have slid! I'm strict about them with all children. I don't do anything different with children who show speech deviations; I'm just more conscious of their needs." (Freeman, 1977, p. 73)*

Normal speech is a critical asset in today's culture.

increasingly employs such technology as dictation equipment, telephone conferences, citizen band radios, and tape recorded messages to increase the range and variety of oral communication. A well modulated, expressive, and easily understood voice is an unquestionable asset. It is understandable that parents and teachers show serious concern if children's speech does not develop in what they consider a normal way.

Like reading and writing, speech is every teacher's business, from the primary grades through secondary school graduation. The way teachers model excellent speech, give recognition for its proper use by pupils, and provide individualized instruction leading to better speech—these are key educational considerations.

Now another role is rapidly shaping for regular teachers, one that in the past had been reserved for the specialist only. This new trend means that

> the selection of any child for individual therapy away from the classroom would be made only after all other possible alternatives had been explored and rejected. The primary goal is to keep the child with a communication problem in the mainstream of education as much as possible. . . .This is seen as a truly cooperative effort on the part of the teacher, the speech clinician, and any other team members involved. (Hull & Hull, 1973, p. 300)

Speech correction belongs in the mainstream.

What the Hulls noted as a new trend in 1973 is now public policy in the United States. That policy includes the special education of children with speech problems in the same domain with regular class instruction. How principals and regular and special teachers join forces to carry out that policy successfully is the main thrust of the following discussion.

Mainstreaming

The implementation of a new policy can be a bumpy road at first. That is especially true if there is less than adequate preparation for the new responsibilities.

This real life story, by Linda East, of Altavista Elementary School in Virginia, tells how one determined first grade teacher mustered the support to cope successfully with what at the outset seemed an impossible situation. In the process, it shows how similar situations might be better prepared for in the future. Significant themes introduced in the story are elaborated later in the chapter.

A Mainstreaming Success Story[3]

☐I've always found it helpful as a teacher to jot down a few first impressions of children after their parents brought them by to enroll in my first grade class. My first impression of Bill seemed normal enough: brown skin, short curly black hair, large almond-shaped brown eyes filled with wonder, terribly shy but terribly excited.

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[3] Reprinted with permission from *Today's Education*, the journal of the National Education Association, Nov.–Dec., 1976, p. 71.

His mother was a large dominating woman with eyes like Bill's that seemed to be busy looking past you as she spoke. "I'm afraid you're going to have trouble with Bill," she said. "He's never been away from home, so he may not known how to act. Didn't send him to kindergarten. I was scared the noise of so many children would upset him. Say hello to Miz East, Bill."

A soft "low" came from Bill, who clung tightly to his mother's hand. As they left, she added an afterthought, "Oh, and Miz East, you may have to help Bill when he goes to the bathroom."

General development seemed grossly retarded.

The next day was to be a sudden awakening as to just how much I would have to help Bill. Besides not being able to use the bathroom by himself, Bill couldn't eat by himself (he chewed one pea at a time); nor could he speak comprehensibly, walk properly, go up or down steps, run, or jump. When asked a question, he mumbled a stream of unrelated sounds. Bill spent most of the first three days crying in my lap as I tried to organize a new class of diverse and demanding first graders.

I quickly rushed in every specialist I could reach, the principal, and a videotape crew to film Bill in the classroom and on the playground. The tape was sent to some specialists I couldn't reach.

Formal assessment was of limited help.

Their verdicts were very discouraging, and I learned nothing new. He obviously needed special education. But mainstreaming meant Bill must remain in my room the entire school year, spending only 10 minutes at the end of each day with a learning disabilities teacher. A speech therapist worked with him twice a week for short periods of time, too.

Each day as I worked with the class, I struggled desperately to make every minute of Bill's time a learning experience. Every evening, I cursed the idea of mainstreaming and wondered what kind of thoughtless people could have instituted such an impossible program.

At lunchtime it was necessary for me to feed Bill. After a week of not eating lunch myself, I decided I would try to teach Bill to feed himself each lunchtime until one of the pupils had finished eating and could take over for me. It became apparent that I wasn't going to be Bill's only teacher—the classroom was filled with 24 eager instructors. And they put all they had into teaching Bill to walk, talk, eat, go to the bathroom by himself, run, jump, go up and down steps, and play.

Informal assessment uncovered Bill's real learning ability.

As weeks went by, miracles began to happen, and each day I went home with a glowing account to give my husband. "Bill learned to say 'lunch tray' today." "Bill learned to eat a forkful of mashed potatoes today." "Bill learned to jump from a small chair today."

Bill demonstrated one skill the first week of school which astonished me and which was to be the basis for further learning experiences. He loved the record player and learned to operate it himself after only one lesson. I realized that if Bill could work the record player by himself, he could learn to do other things as well. By the second month of school, not only could Bill turn on my cassette player, he also could set it up, record his own voice, play the tape back and listen to it. The wonder and smiles on his face delighted me. I recorded simple songs and stories for him to listen to over and over.

At Show-and-Tell time, Bill always mumbled his stories and songs. No one understood anything he said, but the whole class listened attentively to see if he would use one of the words they had taught him. Our big reward finally came at Christmastime, when Bill stood before the class and sang, "Jin'le Bells Jin'le Bells Jin'le Bells" over and over again. The class broke into spontaneous applause, and my eyes filled with tears.

By the end of the school year, Bill had learned to speak in short, comprehensible sentences. He could read ten words and recognize three numbers. He ate by himself, sang songs, walked up and down steps, and ran races.

As for mainstreaming, I learned a big lesson that year: Only a classroom full of "normal" children could have set the examples Bill needed to improve his faulty speech and coordination.

Classmate modeling and tutoring succeeded.

Epilogue: In the end, I volunteered to keep Bill in my classroom the following year. He learned to speak coherently, count to 20, recognize letters and sounds, read through three levels of Ginn, retell stories, and make up his own songs. His attention span increased to 40 minutes.

My deep thanks go to his mother, who worked closely with me, and to his speech, special education, and special reading teachers. Most of all, though, my thanks go to all of Bill's fellow classmates, who set such good examples for him. (East, 1976, p. 71) □

The following are some items to notice in Ms. East's story. They reflect steps she took in working with Bill, as well as her attitude toward school resources.

- Use of notes to record impressions of children at entry.
- Call for consultative aid from the principal and from specialists.
- Immediate check on possible help from specialist teachers: learning disabilities specialist and speech clinician.
- Use of peer teaching, starting with lunch and leading to other things.
- Determination of Bill's cognitive potential by informal assessment, namely, learning to operate the record player.
- Setting of short range objectives and rewards for their attainment.
- Objective record of Bill's accomplishments.
- Increased understanding and ability to maximize use of parent, regular teacher, and specialist teachers team.
- Acknowledgement of helper roles of regular class pupils.

Was Bill mentally retarded? How can you tell?

It may be useful to imagine how an inservice education unit could be developed that might have helped Ms. East or other teachers to manage such situations. What should be included? Why? What roles should the principal and specialist teachers play, if any? Parents? How, when, and where should the inservice be conducted?

This is a striking illustration of a teacher's high caliber competence in the face of an extremely difficult professional challenge. It points up how regular class pupils will react when they see that their teacher is a model of helpfulness. It shows how direct interaction can build positive character in both exceptional children and their "normal" companions. It is an example of the intelligent use of consultative services and of teamwork between regular and specialist teachers. The mainstream conditions under which Ms. East found it necessary to work were less than optimal. But her approach, the decisions she made, and the spirit with which she worked are superb evidences of preferred practices.

Teamwork paid off.

Technology and Special Procedures

Definitions

The following definitions of defective, satisfactory, and good speech are broadly useful for educational purposes.

Defective (or *disordered*) *speech* interferes with communication; it lacks intelligibility. It causes the speaker to be uncomfortable and maladjusted. Defective speech attracts more attention to the speech sounds and accompanying mannerisms than to the content of what the speaker is saying.

Satisfactory speech transmits communication without distortion. It produces little or no affective reaction in the speaker. The content of what the person is saying is conveyed with little or no distraction from mannerisms or unusual speech sounds.

Good speech enhances the communication without distortion. It gives the speaker positive feedback, through hearing and sight, that the intended affective tone is accompanying the message. Accuracy and clarity of speech sounds, in addition to the use of appropriate face, hand, and body movements, add to the force and fullness of the message being communicated.

In short, if speech cannot be readily understood, if it is upsetting to the person speaking, or if it causes distraction or negative reactions from the audience, it is a speech problem. Thus, the definition is entirely functional.

The teacher's first concern, of course, is to help the pupil with defective speech to learn to produce speech in as normal a manner as possible. For all pupils, too, the teacher's objective is to help them attain and use good speech in everday life.

Divisions of Speech and Language Work

Speech development, improvement, and correction have special significance.

Three concepts—speech and language development, speech improvement, and speech correction—take on a new significance in today's climate of inclusion. Teachers and speech and language clinicians recognize that they have much to contribute to each of these activities and that they should share responsibilities for them, though in different degrees.

Speech and language development[4] is the acquisition of increasing ability to understand and produce oral language. It begins at birth and should continue

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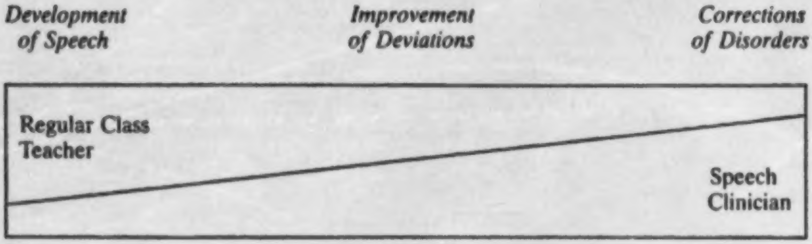
[4] Language can be developed independent of oral speech. See Chapter 11 on hearing impairments. Also, speech is only one of several modes or ways in which humans communicate, but it is the mode most frequently used.

FIGURE 10–1
Regular Class Teacher and Speech Clinician's Sharing of Responsibility



Help communication competency increase.

through life. During childhood, deliberate efforts are made to foster speech and language development by such activities as teaching new words, correct pronunciations, and forms of oral language like questions and exclamations. In the school years it is based on sequential guidelines in printed curricula and textbooks.

Sharpen communication skill and accuracy; prevent defects.

Speech improvement is enhancement of the quality of existing speech. It starts informally in the preschool years when parents monitor their children's oral language and encourage increased clarity, appropriate volume, accurate expressiveness, logical organization, proper temporal sequencing, and correct sound production. Schooling continues those activities and uses oral reading, acting, discussion, debate, role playing, and the like as vehicles. This instruction, like that for speech development, is integral to the language arts curriculum, though it overlaps into other curricular and extracurricular sectors.

Remove or minimize existing defects or disorders.

Speech correction means the remediation of oral speech disorders that interfere with communication to a significant degree. Disordered speech in need of correction is differentiated from imperfect speech still in the normal developmental sequence. Hence, speech correction applies only to significantly deviant speech patterns habituated in the person's day to day talking.

Teachers and speech and language clinicians can help each other in all three functions: development, improvement, and correction. Figure 10–1 represents the sharing of professional knowledge and responsibilities. There is an approximately equal division with respect to speech improvement. The regular class teacher carries the major burden with respect to speech development. The same is true for the clinician with respect to speech correction. There is no sharp dividing line, no solely held territory. The pupil can always look to both for help in any of the three functions.

Procedures with Articulation Defects

Articulation defects are the most frequent speech problems of school age children. Most common in early elementary school, some persist into the secondary and college years. They fall into three classes:

1. Omission of certain sounds, such as "I like ou" for "I like you."
2. Substitution of one sound for another, like "Acwoss de wibew" for "Across the river."
3. Distortion of sounds, like "srimp" for "shrimp" or "schtop" for "stop."

Corrective procedures are well established.

These three types of speech errors have been studied thoroughly and there are proven methods of correcting them. The errors appear to be developmental in origin in the sense that a particular part of the child's step by step acquisition of normal speech fixated instead of moving along toward the next developmental point.

For instance, it is part of the normal speech development process for kindergarteners to sometimes call "bawoon" for "balloon." But if by the end of second grade or the beginning of third grade that substitution continues, it is a sign that corrective work is probably needed.

The analysis of an example can illustrate this point. Johnny came to first grade with a Band-Aid on his index finger one morning in October. He held it up for the teacher to see and said, "I tut my finder on a thoup tan. Mommy wapped it up. It will det be'er thoon, Mommy thay."

The teacher knew that Johnny's cognitive development was superior because of how quickly he adapted in school and because of how readily he had learned daily routines. But his speech was often difficult to understand. What to do about it?

First, take note of Johnny's speech errors.

First we analyze errors.

*T*ut for *c*ut
Fi*nd*er for fi*ng*er
*Th*oup for *s*oup
*T*an for *c*an
*W*apped for *wr*apped
*D*et for *g*et
Be'er for be*tt*er
*Th*oon for *s*oon
*Th*ay for *s*ay

The next step is to look at the errors Johnny made. They are marked by asterisks in the sequences below which show the order in which the correct use of sounds tends to develop in young children. There is one asterisk for each error.

Before starting kindergarten, children usually have good command of these sounds in oral communication:

No trouble for Johnny here.

/w/ as in we, one, water
/b/ as in baby, bat, bug
/h/ as in hop, hair, hat
/m/ as in me, mad, mother
/p/ as in paper, pop, pole

In kindergarten and first grade it is natural for some pupils to be still learning to use these sounds correctly:

/y/ as in you, yes, yet
/d/ as in day, bed, doll
/ng/ as in ring, thing, singer
**/k/ as in can, ink, tack
/n/ as in nut, knife, new
*/t/ as in toe, hit, batter
*/g/ as in big, getting, gas
/f/ as in fall, leaf, offer

Four sounds give problems here.

During second grade a number of pupils will be gaining increased control over these sounds:

/v/ as in vase, stove, five
/sh/ as in shoot, shine, dish
/th/ as in bathe, father, this
/l/ as in lot, limb, bill

No trouble here.

By the end of the third grade almost all children should be using these sounds properly in everyday speech:

/th/ as in thin, three, bath
/z/ as in zero, hose, his
***/s/ as in soap, mess, biscuit
*/r/ as in rain, rip, over

Two sounds give difficulty here.

When seen in the perspective of these lists, Johnny's imperfections are revealed to be normal, natural ones, consistent with his current development. Johnny has no difficulty with the sounds most pupils make easily by the beginning of first grade. There is some difficulty with four "first grade" and two "third grade" sounds.

Compare errors with speech development milestones.

He should not be reprimanded or teased for his manner of speech. He ought not be singled out in any way or told that his speech is incorrect or defective. Individual corrective exercises are not the most appropriate approach, either. The regular teacher's skills, augmented by consultation by a speech clinician, are best directed at helping Johnny improve his speech in the context of speech and language development activities with the whole class. The first grade sounds are the ones to emphasize in this speech improvement activity.

One of the advantages of the suggested sound groupings by grades is that they let teachers know where to begin. They are not hard and fast timetables. If anything, they are conservative. The sounds that are listed by grades can be linked to the sequence of the phonic elements introduced in the basic reading series; teaching one can then reinforce the other. Related illustrative material can be found in Birch, Matthews, and Burgi (1958).

Decide on a course of action.

Suppose, however, that Johnny had been a third grader, not a first grader. Then corrective intervention *on the first grade sounds* would be justified.

There is a three-step sequence that has a good record of effectiveness in remediation in such cases.

Consult a clinician about a three-step intervention.

First, be sure the child hears the error. This often requires ear (auditory) training to help the child learn to notice how the correct and incorrect sounds differ. Masking the mouth with a card, one can make the sound correctly and incorrectly, in isolation and in words, to see if the child catches the differences. Tape recordings of sounds can be used, too. The speech clinician can suggest many interesting ways to conduct auditory training. Children can help each other. It is fundamentally important that the child become able to hear the correct sound made by someone else and to distinguish it from other sounds. Some sounds can be readily seen and felt, too. It helps if the child can see and feel the error and the correct sound and note the differences.

Second, be sure the child can produce the sound correctly. Once the youngster can hear the sound, it is possible to use a tape recorder, for instance, to make comparisons between the actual sound the child produces and a correct model. Then the child can be brought, through successive approximations, to say the sound acceptably. Again, speech clinicians have identified many ways to motivate interest in achieving the correct response. Practice should continue until the pupil produces the target sound acceptably on almost every attempt.

Third, move the newly acquired correct sound into everyday speech and fix it in the pupil's spontaneous language usage. The first two steps do not result in automatic accomplishment of the third. A large amount of highly motivated and closely monitored repetition is needed to establish a new or revised speech habit.

Investigate related factors.

This three-step outline of a teaching method can be fleshed out and individualized in planning sessions in which the particular child's characteristics are taken fully into account. Potential physical and environmental factors that might cause the articulation error should be investigated, also. For instance, is the child's hearing in the normal range? Do the child's parents or other frequently seen adults make the same articulation error, providing a constant model? The speech clinician will know about high interest instructional materials and procedures for use both in class and by the parents at home.

Procedures with Voice Problems

Voice problems are harder to pinpoint.

Voice problems are difficult to describe objectively. What is strange or objectionable to one person may be intriguing or distinctive to another.

Among the five types of voice problems (quality, rate, flexibility, volume, and pitch) the first in frequency is *quality*. Included under voice quality problems are voices that are so nasal, harsh, or breathy that they interfere with communication. *Rate* problems refer to dragged out, prolonged speech, or the converse—extremely quick, clipped, staccato speech—either of which is so pronounced as to diminish intelligibility. A *flexibility* disorder is exemplified by a flat, uninterrupted monotone that is difficult to attend to. *Volume* refers to a too loud or too soft voice for the situation. *Pitch* has reference to a voice that is too high or too deep.

Abrupt changes in a pupil's voice may signal a medical problem. The appropriate move is to call such a change to the parent's or school nurse's attention.

Voice problems are so idiosyncratic that the regular teacher should seek consultation with a speech clinician before attempting corrective steps. One principle to be mindful of in the meantime is to model considerate and acceptant behavior for other teachers and classmates. It is easy for a voice problem to mark a child for ridicule.

Procedures for Stuttering

Stuttering (or *stammering*) refers to stoppages or pauses that noticeably interrupt the flow of speech. The stoppages are involuntary and irritating to the speaker and the listener. Stuttering is also termed disfluency or nonfluency.

Stuttering can be remedied.

Overcoming stuttering is a complex and often time-consuming process, but the rewards can be great. Shames and Florance (1980) described a recently validated five-step sequence by which stutterers reach stutter-free speech. It is effective on a group or individual basis in school settings. Followup studies demonstrated that persons who completed the therapy ceased to stutter and that most of them no longer consider themselves stutterers.

In Phase I the stutterer uses a delayed auditory feedback device to interfere with present speech patterns and to learn to speak in a deliberate and very controlled new way. Recognition that the stuttering can be eliminated, even though the price is constant watchfulness and somewhat mechanical delivery, offers strong motivation to continue.

Phase II is practice under the tight monitoring conditions of Phase I. The individual assesses personal speech behavior, administering self-rewards for periods of speech without disfluencies. The most reinforcing reward is to drop the tight control briefly and just speak freely for a short time.

Controlled speech must be practiced in daily activities.

The Phase III focus is on moving controlled speech fully into daily life activities. While life activities differ for each person, the underlying pattern for Phase III is similar. Contracts are written that require the individual to engage in progressively more free (nondeliberate) speech with associates, subsequently evaluate the outcomes, and report them to the speech and language clinician.

It is in Phase IV that the clinician's role changes from close guidance and supervision to one more like a mentor, who is available as needed for support and understanding. Some direct instruction in effective use of the new-found freedom of speech continues. The stutterer grows in confidence, replacing more and more monitored, controlled speech with well inflected and modulated stutter-free speech.

Phase V is evaluative, studying the effectiveness and maintenance level of the whole process. It is on the basis of such followup that Shames and Florance reported close to 95% success over a 6 year period.

The time required varies greatly, from as little as 2 weeks to as long as 2 years. The youngest stutterers with whom the five-phase system has been effective were 6 years old.

With children under 8, the Shames-Florance procedure uses clinician response to replace the Phase I delayed auditory feedback device. Also, Phase IV moves into place more naturally with younger persons, sometimes proving unnecessary as a distinct step.

Whether or not stutterers are under some special form of therapy, teachers and principals have two good principles to follow to help pupils keep nonfluency in check and to be full regular class participants.

School climate has an effect that educators can control.

First, know that conflict or excitement tends to increase stuttering behavior. This does not mean one should overprotect nonfluent children, keeping all stress or exuberance out of their lives. Rather, it means one should expect and not be surprised by what happens to their speech under such conditions. Also, it means that one should help nonfluent children and youth learn to consciously control their own activity and emotional states while talking.

Second, treat children who stutter like the other children. Call on them. Give them opportunities to ask questions and take the time to listen. Do not fill in words for them any more than for any other child. Be a model for the stuttering pupil's classmates.

Procedures with Developmental Delay

Stimulate speech and language.

Slow mental development is paralleled by slow speech and language development. Speech and language stimulation is the recommended procedure in such cases. It has two components, quantitative and qualitative. The first is aimed at increasing the sheer amount of meaningful verbalization. The second focuses on raising the level of accuracy and variety of the pupil's oral expression. Applied behavior analysis procedures have shown great promise in both components of speech and language stimulation.

Speech clinicians and teachers, working at speech and language stimulation as a team with parents and aides, can prove important in the life of a pupil who

Some youngsters are kept by impairments from developing any communication ability on their own. Deaf and deaf-blind children are among that group, but there are well worked out ways to help them to establish language systems and communication. Others, not deaf or deaf-blind, have received less attention.

Now there is a rapidly growing research and development effort to build language and communication capabilities for nonspeaking severely and profoundly impaired children, for autistic and autistic-like children, and for other nonverbal, language delayed children. These severely communicatively handicapped young people make up a small but important group. Many have potentials that they cannot show. Speech and language clinicians are joining with psychologists, teachers, engineers, and others to adapt old means (sign, Bliss symbols, codes) and to invent new means (communication boards, electronic devices) to break the barriers that now stand in the way of their education. (See Chapter 13, pp. 449–450.)

shows slow cognitive development. When speech is stimulated, language growth is most likely promoted, too. When the amount, accuracy, and variety of a child's oral language grows, it is evidence of growth in cognition. Thus, the impact of successful speech and language stimulation can be heightened cognitive development, actually increased intelligence, for the child. The effect is pronounced on some children, particularly those whose home and family lives have been relatively void of such stimulation.

Better speech and language means increased learning power.

Prevailing Versus Preferred Practices

On the left are listed practices that are usually found in speech improvement and correction programs in today's schools. On the right are preferred practices. While less frequent, the preferred practices are found in schools that are showing the way to others.

Prevailing Practices	**Preferred Practices**
1. Annually the speech clinician screens kindergarten or first grade pupils by taking them, one at a time, to a small specially equipped room where speech articulation, rhythm, and voice tests are administered. Special speech testing and instructional materials are available in the speech correction room.	1. The speech clinician teams with the kindergarten and first grade teacher to assess pupils' speech and language status. They jointly plan and conduct speech and language improvement for the whole class. The clinician notes which pupils provide excellent speech models, checks the developmental status of each pupil with regard to language and speech production, and records any serious aberrations in speech or language. This is done informally in the regular class during general speech and language instruction.
2. The clinician selects certain pupils, perhaps five or six from a room, for weekly or semiweekly correction lessons. These pupils leave their regular schedule, going to the speech clinician's room for their special instruction. There they are taught individually or in groups of three or four with similar speech problems.	2. The regular class teacher and the speech clinician jointly plan and carry out improvement and corrective procedures as an integral part of the language arts component of the regular curriculum. Pupils with all degrees and kinds of speech problems are helped as a matter of course, individually or in small groups, in the context of regular class work.

Assessment is part of language instruction.

Improvement and correction are blended with the regular curriculum.

Materials and equipment come to the regular class.

The language arts teacher remains a close partner.

Prevailing Practices	Preferred Practices
3. Occasionally the clinician and the teacher have brief hallway talks about how the children designated as having speech defects are progressing. Sometimes the clinician gives suggestions for regular class help. When a child's speech is sufficiently corrected, regular visits to the speech correction room taper off to a maintenance schedule and finally stop.	3. Clinicians bring to regular classes the special equipment and materials for speech and language assessment and corrective instruction. Teachers are shown how to do speech articulation assessment and corrective instruction. Occasionally a child is moved to the speech clinician's room for intensive work, but not regularly. All pupils have been oriented to the speech correction room. It is also used by others from time to time for teacher planning sessions, parent conferences, and individual or small group tutoring.
4. The same pattern is followed through all the elementary middle, and secondary schools whether open-space or traditional in design. Some pupils continue to receive corrective attention for several consecutive years.	4. This pattern continues through high school, where the child has several teachers. The closest team partner with the clinician is the language arts teacher. The other teachers are kept informed and shown how to help. In open-space schools the clinician may team simultaneously with several teachers who are jointly responsible for larger groups of pupils. Coordination is accomplished through the team leader, but the principles illustrated above remain the same.

"It points out the value of redeployment of staff energy and existing resources. . ." (Green, 1977)

Total time spent by clinicians is not different in either the prevailing or the preferred practices. The preferred practices do reduce some "dead time" occasioned by back and forth movement of pupils and clinician from class to speech correction room. Teacher aides can be used to good effect in either approach. The preferred practices also encourage participation by the speech clinician in the language arts curriculum. That is an advantage. Speech clinicians are among the best informed faculty members regarding linguistics, oral expression, and the developmental aspects of human language. Their frequent presence in regular classes encourages their participation in assessing other learning problems, while making speech improvement and correction as natural to all pupils as the improvement and correction of arithmetic. A case load of names can be maintained under the preferred practices, and it can be used for administrative purposes without obtruding into the pupil's awareness.

Illustration of an Effective School Program

Earlier in this chapter Bill, a first grader with limited speech and several other problems, was introduced. His teacher made telling use of every resource she could muster. That tale illustrated the present state of the art in many places. It shows what intelligently applied effort can do, even under prevailing practices.

As the next description unfolds, think about how a Bill and a Ms. East might interact in these different circumstances. Would the principles governing the teacher's actions change? Would there be differences in the details of the two stories? Would the outcomes change?

☐Richardson is a rapidly growing Texas community near Dallas. It had approximately 36,000 pupils in its elementary and secondary schools in 1976. In 1968–69, moves began to bring special education and regular education together. At the same time, decentralization started in all the school system's operations. There has been a steady march toward accomplishing both goals.

Now, every child who enters a Richardson kindergarten meets and talks with a speech and language clinician along with a kindergarten teacher as part of the day to day experience in the kindergarten class. There are 21 elementary schools in the system. Each has a full-time speech and language clinician on the faculty. They spend the first 60 days of each term with teachers in kindergarten classes working at diagnostics, individualized program planning, and speech and language development.

Speech and language specialists team teach from kindergarten on with regular teachers.

Ten years ago Richardson's clinicians would have waited for referrals by teachers regarding children with speech problems. At that time case loads were 90% articulation errors. Today, clinicians' functions are much more extensive. Their title, speech and language therapists, tells part of that story. So does the average case load of about 70 children, of whom only about 5% have articulation problems. Nearly 90% are pupils who present language problems and with whom the therapists frequently work in small groups in the context of the regular class.

The language backgrounds of the therapists in Richardson serve mainly to bolster the kindergarten-primary language curriculum, though two full-time clinicians and half time of another are assigned to service high schools, too. There is cooperation, not overlap, between the therapists, regular teachers, and other special educators who work in the same settings as resource teachers. Sometimes, when it is advisable to pull one or more pupils out of a regular class for specialized instruction, the therapist may work in another location (such as a learning lab) where one-to-one instruction may be common (see Chapter 7, pp. 227–228).

Secondary schools are served, too.

For most work specific to speech as such—articulation, voice, stuttering, and the like—pupils are taken from the regular class to a separate therapy room in their school. Richardson's pattern in this, though, is one of intense concentration aimed at speedy results. Ordinarily, arrangements are made with the regular class teacher for a regular one-period-per-day schedule with the therapist. Progress in correction is usually so apparent that the regular

Corrective speech work is intense.

teachers and other pupils quickly notice changes and take real satisfaction in giving supplemental support to the pupil. Also, the therapist makes periodic personal reports to the regular teacher.

Most special education is undifferentiated in the preschool years.

This school district conducts prekindergarten classes, too, beginning at age 3, for children who, by that time, can be seen to need some form of special education. Many of them are showing speech and language problems, in addition to other problems. In these noncategorized early childhood groups there are speech and language therapists who team teach with other specialists. All work is done in the class setting itself.

In their language instruction in regular classes, the therapists tend to work with small groups selected because of basic language problems and language development needs. They attend to aspects of language that underlie reading, writing, spelling, listening, and speaking, rather than attempt to teach in those curricular areas directly. The therapist and regular teacher make assessments based on actual samples of the pupil's writing, speaking, and other language behavior. Sometimes clinical language tests are used, but much of the assessment is based on the day to day language production (or lack of it) of the pupil.

It is in the natural environment that communication needs are identified.

If a pupil's writing performance is inadequate, the assessment may reveal that the youngster is also unable to express orally what the assignment requested in written form. The speech and language therapist may trace this linguistic lack to foundational weaknesses in the pupil's conceptions about morphology or semantics. Then, using material from the regular class social studies texts, spelling lists, preprimers, or whatever else is used by the regular teacher, the therapist helps the pupil to develop and strengthen the ability to understand the nature of whatever the inhibiting condition is and to learn how to overcome it. Sometimes a third professional, perhaps a resource teacher, works with the same pupil on remedial reading, for instance, in concert with the language therapist and the regular teacher.

The consultative help of a speech and language therapist makes its way to the regular teacher through a fairly typical referral process. It usually begins with the regular teacher contacting a counselor or principal when a pupil is experiencing difficulty. From there it moves quickly through the Texas Admission-Review-Dismissal Committee process (similar to the IEP process). When special educational assistance is no longer needed, that same committee officially disengages the support linkages that had been put in place earlier by the regular-special educator team, and the speech and language therapists move to the next cases.

> *No intervention program can claim to be effective without ongoing evaluation. Only through such feedback can program alterations be made and teachers' responses and initiations be directed toward specific intervention strategies. When objective records on language-impaired children indicate teachers are talking less and listening more, and children are talking more and talking better, a picture is given of a truly effective classroom intervention program. (Allen, 1980, p. 10)*

Actually, the process is much less mechanical than it might sound. Within the school, everyone is in some sense a teacher of language and speech. That helps establish and maintain a rapport among the faculty. It encourages easy informality and a shared mutual concern for all pupils, with or without speech and language problems.

Richardson's operations are not fully described in this summary. They include many other forward looking practices. Richardson, with many other communities in Texas and other states, has made serious efforts to determine the value of innovative practices. Those described have had their merits tested and have won in the hard court of community acceptance. □

Current Trends

Real weight is now being given to preventing speech problems and to enhancing the speech and language development of all pupils. The way the clinician's time is used is becoming more related to the work to be done with regular class teachers. That "teaming" can be observed in other emerging trends, too.

Clinicians share their know-how with others.

Like school psychologists and specialists with gifted, retarded, blind, deaf, crippled, disturbed, or learning disabled pupils, speech and language clinicians now see how important it is to "give away" many of their closely guarded skills to others. This trend encourages principals and teachers (and often parents or aides) to help pupils in ways previously reserved for the speech clinician. Research in the early 1950's indicated that parents, working at home under the guidance of speech clinicians, produced significant, positive changes in their children's speech. Bradley (1976) commented that such findings should not surprise us, in view of the fact "that mothers, without any specific training, have been helping 80 to 90% of the population acquire and use language skills by three years of age, in every cultural and socioeconomic setting" (p. 1).

Service expands through aides.

Alvord (1977) described how seven Iowa speech clinicians prepared and supervised nine communication aides to work with pupils who showed articulatory disorders that required correction. The aides produced results equivalent to what speech clinicians attained with similar pupils, in a comparable amount of time and with high maintenance of results. The cost-effectiveness gain was appreciable. Equally important, a marked increase in clinician time availability was noted. How best to use that time now becomes a matter of real concern, where before it had been only an academic question. (An earlier study in the same direction was reported by Alpiner, 1968.)

Generic qualification grows.

Another trend is to prepare speech clinicians to be qualified also as regular class teachers and as specialists in educating children with learning disabilities/behavioral disorders, slow cognitive development, hearing impairments, or other exceptionalities. A clinician who is also a specialist in learning disabilities and behavior disorders or a regular class teacher might well be employed to great advantage in a wide-ranging role in one school building, even one with a small enrollment. Multiple certification, or "generic" certification combining several specializations, is attracting more and more attention.

Clinicians' views influence individualization.

Speech and language clinicians also participate more in basic elementary and secondary school programs. Ainsworth (1965) encouraged that move early. Other leaders (Hull & Hull, 1973), too, press for added integration of clinical speech work and the rest of the school's programs. The clinician's point of view can be helpful to all pupils, especially if injected during curriculum planning and program individualization design (IEP development).

Applied behavioral analysis is a working tool.

A complementary trend is toward deeper involvement of all teachers in speech remediation for individual pupils. That involvement touches the whole range of types and severity and ages in which speech problems appear. Applied behavior analysis studies have spotlighted the significance of modeling the value of planned reinforcement schemes in changing speech patterns. The work of Bandura (1971) and others showed how observational learning aids in pupil acquisition of skills and understandings. The regular class is a favorable staging area for the application of such learning principles in contrast to the one-to-one setting or the small homogeneous speech problem group in which speech clinicians ordinarily worked. And the regular teacher is the more logical implementer of reinforcement principles, though they may well be planned, and their outcomes assessed, jointly with the speech clinician.

The tendency to open public schools to children with highly complex academic learning, personal management, mobility, and communication problems was mentioned in earlier chapters. The response to "right to education" mandates encouraged schools to offer speech development and improvement instruction to pupils who had not before been served. One result is an accumulation of evidence that speech work can bring about significant changes in the language capabilities of pupils with slow cognitive development and other developmental disabilities such as autism and cerebral palsy. Here, too, the "giving away" of professional-technical procedures makes much more progress possible. Bradley (1976) said in this connection:

> Speech pathologists have found one thing to be most critical. They must be willing to share their techniques with teachers, childcare workers, parents and students who can assist them in the development, stabilization, and generalization of goals appropriate to the handicapped individual's present level of functioning. (p.3)

Instruction starts with day one and continues.

A trend of great significance to principals and to nursery and kindergarten-primary teachers is a two-pronged thrust of speech clinicians toward the early childhood years. Not long ago, when clinical speech work was almost entirely corrective, it was common to hear it said that youngsters under 7 or 8 years old were too young to benefit from the assistance of the speech clinician. Now that the potentialities of speech improvement and language and speech development are better understood, that statement is less often heard. Instead, two things are happening. First, developmental and improvement speech and language procedures are being used with babies and toddlers from birth to age 3, and their parents, in home based or center based operations. Second, speech clinicians are pairing with nursery and kindergarten-primary teachers to foster general speech development and improvement.

Thus, six current trends have been identified.

Current trends point to superior service.

1. More emphasis on speech and language development and improvement, rather than sole attention to corrective work.
2. Recognition of the need to "give away" professional-technical skills to colleagues in order to allow everyone's work to be more effective.
3. Broadening of professional preparation both for regular class teachers and for speech clinicians.
4. Closer teamwork with regular class teachers and with the general school curriculum.
5. Expansion of clinical speech instruction to handicapped pupils who present the most complex educational problems.
6. A new service emphasis thrust toward the earliest preschool and the early school years for all children.

If these trends are attended by a sensitivity to the need for high professional standards and the need for thoughtful evaluation, they could result in superior service to a much larger portion of the pupils who need it.

The Role of the Regular Class Teacher, Clinician, and Principal

Practices of the past took children with speech problems out of mainstream classes to separate special rooms for speech instruction. Many schools are showing, however, that a less restrictive alternative is to bring the speech clinician's help to the pupils who need it while they are in regular classes. Thus, principals and teachers can expect speech clinicians to move step by step into the current of education's mainstream. That pattern is in keeping with present national public policy. Since it is already operationally realistic, its spread can be anticipated.

There are a number of guidelines that principals, teachers, and clinicians will find useful as they shape individualized programs of instruction, whether full integration has been reached or is still on its way.

Weak speech and language slows all progress.

Like the rest of the language arts, speech and language progress through a sequence of higher and more complex skill stages as the child grows and matures. And, as in reading and the other communication skills, children learn at different rates. Some fail to progress in speech and language at all, despite serious efforts to help them.

When that happens the impact of inadequate speech and language ricochets across the rest of the school's curriculum. Talking about science or social studies becomes more difficult. Asking questions in shop or health class calls attention to the defective communication. No part of schooling is unaffected.

Thus, when principal, teachers, and clinicians mobilize for corrective action regarding a language or speech defect, all components of the curriculum should be thought of as resources. If music or art activities, for instance, are not enlisted in support of the remedial plan, they may not prove neutral. Rather, activities and teacher expectations in art or music might inadvertently thwart the carefully designed corrective reinforcement of appropriate language or speech, for instance, during reading and arithmetic instruction. The prime principle of curriculum individualization for corrective language and speech, therefore, is to involve all elements of the school curriculum in the remedial effort in a coordinated way, while keeping the central focus on the language arts.

Materials and training are essential.

A rich array of well tested instructional materials can be found to support all aspects of speech and language instruction. Speech development is an intrinsic part of most elementary, middle, and secondary school language textbook series. Speech improvement materials are widely used. An example of a carefully designed set is *The Best Speech Series.*[5] It includes workbooks for kindergarten-primary regular classes to help improve use of the six most frequently misarticulated sounds in American English, plus lesson guides for teachers and parents (see also, Byrne, 1965; Goldman & Lynch, 1971). For speech correction, these materials and many others can be examined (and often borrowed) from instructional materials centers. (Check with state education agencies for the locations of these centers.)

Principals, working with teacher committees, can arrange inservice sessions for faculties about speech and language improvement and correction. Instructional materials center staffs will help.

Adaptive scheduling is the key

Regular class teachers find that four factors about speech and language programs influence daily class activities. First, pupils are sometimes withdrawn to attend therapy sessions. That means certain children will be away from 1 to 5 times a week for 15 to 30 minutes at a time. Class plans must be adjusted if the impact of those absences is to be minimized. Second, the clinician and the regular class teacher must confer and plan about pupils and problems. Time must be built into the week's schedule for that. The principal has a responsibility here, too. Third, teachers should carry on specific, individualized activities for children with speech problems to complement the activities conducted in separate sessions with the clinician. Those must be woven into the day's fabric. Fourth, the regular teacher and the clinician increasingly spend time in team teaching, both in the same class. The scenario for space allocation, pupil grouping, materials availability, and timetable calls for flexible arrangements.

Added to these four contingencies will be occasions when the regular teacher will sit in on or participate in therapy sessions in the clinician's room, or when both will confer with parents, the principal, or with other specialist colleagues. All in all, ingenuity is needed, particularly when the regular teacher interfaces with the less desirable speech and language program that re-moves children from regular classes for short time periods on an irregular schedule during the week.

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[5] An adapted set was also designed for children with slow cognitive development. Both are available from Stanwix House, Inc., 3020 Chartiers Ave., Pittsburgh PA 15204.

It is in curriculum, teaching methodology, instructional materials, and organization for instruction that the individualization necessitated by speech and language problems is most urgent. No physical plant adaptations or ancillary service needs arise from dealing with speech problems as such. However, it is reemphasized here that speech problems do appear, and usually with greater incidence, in connection with all other exceptionalities. Hence, wherever other exceptional children are found in school, the staffing pattern and related arrangements should include speech and language clinicians.

Instructional adaptations are critical.

Summary

The public schools of the nation are coming closer to fulfilling the obligation to correct or ameliorate defective language and speech among all school age children and youth. In the 1980's, services promise to encompass pupils from 3 to 21 years old.

In many exceptional children, speech and language problems are clearly present by the third year of life. A comprehensive school based program ought to have a staff of clinicians actively seeking and beginning corrective and preventive work by that early age. In addition, speech and language problems can arise at any later time. Therefore, a truly complete program must have the staff and facilities to bring corrective instruction to pupils in elementary, middle, high, and technical schools. Moreover, sufficient staff are needed to conduct thorough and intensive activity for all who need it as soon as they are located and as long as it is required.

Older children and youth need help, too.

The public schools, though, are not the only agencies that should take part if truly comprehensive coverage is to be assured. Some speech problems show themselves even before age 3. Some occur during middle adulthood and others are associated with aging. Health, rehabilitation, higher education, and social welfare organizations, public and private, have parts to play, too, for individuals not reached by the public schools.

Full programming, too, must have a public information component so it will be known, and it must be free or within reasonable reach as to cost. The potential for all of that is here at present. The education professions, jointly with the other helping professions, can be instrumental in changing that potentiality into an actuality.

What Every School with Speech and Language Impaired Pupils Should Have

Principals and teachers can use this checklist to assess their school's preparedness to deal appropriately with pupils who present speech and language problems. The amount and the deployment of the necessary provisions will, of course, be determined by the number and nature of the student body.

The checklist helps assess the school's preparedness.

Personnel

☐ Speech and language clinician oriented to prevention (improvement) and mainstream service delivery.
☐ Administration and regular faculty attuned to language and speech development and correction.
☐ Access to consultation and service for complex conditions like cerebral palsy speech and stuttering.
☐ School service and business staff informed about accepted ways to relate to pupils with language and speech problems.
☐ Volunteers and aides to devote time, under supervision, to pupils who need speech and language improvement and correction.

Pupils

☐ Student body understanding of speech and language differences.
☐ Ready access to special materials and needed personnel.

Facilities and Arrangements

☐ Space and materials for clinician to use in regular classes and for separate, private contacts with pupils, teacher, and parents, when needed.
☐ Scheduling procedures flexible enough to encourage teacher-pupil-clinician-aide interactions to plan and conduct improvement and corrective work in best interests of pupils.

Continuing Education

☐ Periodic inservice update for faculty and staff on developments in special education.
☐ Short orientation procedure for new or substitute faculty and staff.

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CHAPTER 11 Hearing Impairments

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The Challenge to Educators

Mike was the first acoustically handicapped student to be fully integrated at Robin Mickle Junior High.[1] In the spring of 1974, he entered the school as a seventh grader, and on June 3, 1977, he graduated.

In spite of a severe bilateral sensorineural hearing loss, Mike had successfully completed a program at Prescott Elementary School. For five years, he had been a full-time student in the self-contained unit for the acoustically handicapped there. Then, when he was in the fourth grade, he joined a regular class, although he still got help from teachers in the special unit.

Pupil motivation deserves to be considered in program choices.

When he had almost completed the sixth grade, Mike and his parents and teachers discussed whether he should attend Robin Mickle Junior High School or the Nebraska School for the Deaf in Omaha. (At that time, the Lincoln public school system did not have a secondary program for acoustically handicapped students.) Mike wanted to attend Mickle, it was in his neighborhood, and his sister had gone there. Mike was accepted as the first acoustically handicapped student at Robin Mickle Junior High to be fully integrated in all of his classes.

Since this was a new experience for the Robin Mickle faculty, the week before Mike started classes an inservice program was conducted for the teachers. This venture was a cooperative effort by the resource teacher for the acoustically handicapped, the counselor, classroom teachers, Mike, and his parents.

We began the inservice program with an explanation of hearing loss and of the implications of such a loss for a student's learning. (An acoustically handicapped student will generally have difficulty with reading, language, and vocabulary development.) We displayed a hearing aid, explaining that it merely amplifies sound and does not return the individual's hearing to "normal." We pointed out also that a hearing aid amplifies all sounds and does not selectively amplify speech.

Teacher preparation is basic to pupil success.

We invited Mike to attend the inservice session to meet his teachers and to give the teachers an opportunity to meet him before classes started. We gave Mike his schedule at this time and walked him through it so he would know where each class met.

We gave the teachers suggestions on how to help Mike in class:

- Speak naturally, without over-enunciating. Speaking naturally helps the lip- or speech-reader.
- Remember to face Mike while speaking or lecturing. A speech-reader needs full view of the speaker's face.
- A student with a hearing loss will have difficulty understanding films with a good deal of narration. Provide Mike in advance with notes or explanations of such films.

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[1] Mike's story, told from life by Vicki Woodburn and Marge Schuster, introduces many themes that will be developed in this chapter.

Attention to communication is the key.

- During class discussions, indicate who is going to speak so Mike can focus his attention on that person.
- Be aware of speech-reading distractions—mustaches, gum chewing, pens or glasses held in front of the speaker's mouth.
- Seat Mike near the front and center of the room so that he can easily see the teacher.

We emphasized an important point in the inservice session: help Mike prepare ahead of time so that he doesn't have to catch up to the rest of the class. He can keep one step ahead of the other students by being briefed on new material before he gets to class. This approach makes the class run more smoothly for the teacher and helps make the situation more profitable and pleasant for the student.

Mike was the first acoustically handicapped student in his school.

From the opening of the school year, in order for Mike to be prepared ahead of time for each class, the teachers and the resource teacher worked together on a regular basis, informing one another of assignments, new vocabulary, and so on. Admittedly, this special effort put an extra burden on the teachers, but it contributed positively to Mike's success.

In the seventh grade, Mike registered for classes in Animal Science and Basic Studies (English and social studies), both of which required a lot of reading. To help Mike with reading assignments, the resource teacher got the assignments from his teachers before they were given in class and outlined or summarized the chapters or texts for Mike.

In the seventh grade, Mike also took Oceanography, a course involving quite an advanced vocabulary. The Oceanography teacher taped each day's lesson in advance for the entire nine weeks of the course. The resource teacher then transcribed the lessons so Mike could read them and learn the required material.

Other classes in which Mike needed special help were World of Construction and World of Manufacturing—essential classes for students considering occupations that are not language oriented. These courses are detailed and relatively difficult. The teachers recognized both the difficulty of the classes and the need to give students like Mike this exposure. Consequently, they provided materials that Mike could study with the resource teacher before taking tests.

Although math was one of Mike's favorite subjects, ninth grade algebra turned out to be very difficult for him. During the first semester, Mike became so frustrated that he asked to change his class and teacher, hoping to get a fresh start on the subject. It is school policy that a student who wants to change a class must approach the teachers involved and request the change. Mike was no exception. With the counselor, he approached the teachers and explained his desire to change. The teachers agreed to the request. This procedure helped Mike accept responsibility and become actively involved with changes that affected him.

Build on the pupil's assets.

One of Mike's assets is his athletic ability. At Robin Mickle, this ability to excel in most sports was a real asset to him in making friends.

Teachers were aware that Mike is "normal" enough to misbehave and responsible enough to correct his misbehavior. Mike had his share of ups and downs, including ninth grade spring fever. He also taught his friends some manual communication, so that when they were too far apart to visit verbally they could finger spell their messages to one another.

Mike is the second child in his family. He has a sister in college and a brother in junior high. No one would be naive enough to suggest that a hearing impaired child makes no difference in a family. Both Mike's parents and his siblings, however, appear to accept and love him unconditionally. He has the 100% support of his family.

Mike's family is aware of his difficulties, but they are not defensive, nor do they overreact to his problem. Quite the contrary. The family is cognizant that Mike is a "kid" with his quota of both strong and weak points. When problems arise, they approach them with openness, and teachers and parents are able to work things out together.

Family support helps greatly.

Mike's parents give this reaction to his three years at Robin Mickle Junior High:

> When Mike was ready for junior high, we were faced with making the decision as to whether he should continue in the Lincoln public school system and attend Robin Mickle or whether he should go to a school for the deaf, such as Nebraska School for the Deaf in Omaha. His three years at Robin Mickle are complete, and we can truthfully say that we feel the right decision was made in having him attend school there.
>
> Although we were a bit apprehensive at first, our minds were soon put at ease by the willingness of the administration and staff at Mickle to take on this "special" boy as part of their regular student body. During these years, the lines of communication between school and home have been kept open, and therefore most small problems have been solved before they could become large ones.
>
> We have felt free to contact the principal, the counselor, or any of the teachers at any time, and this has certainly contributed to his success at Mickle. A lot of the credit for the success is due to the very dependable, devoted resource teacher. She has worked with the staff so that before Mike ever got to a class, teachers understood his problem and knew how best to help him.
>
> Mike has had to work hard but has been rewarded greatly. We feel that Mike has truly been a part of the school in every way, which has been rewarding for him. Mike has gotten a sound junior high education.
>
> Living at home and attending Robin Mickle has allowed Mike to compete in a hearing world in all phases of his life. Although he has a severe hearing loss, he is able to participate in oral school functions. He has learned to communicate and get along with both hearing adults and peers, and his speaking vocabulary has been greatly increased by this exposure. Mike has been socially accepted by both the boys and the girls in academic and extracurricular activities.

Mike was in the mainstream at all three levels—physical, social, and instructional.

Here are Mike's own impressions of his three years at Mickle:

> I really am glad I got to go to Mickle Junior High for my three years. It has been a great experience for me to be with hearing kids. Mickle is a good place for anybody because they have a good staff and great teachers. Teachers are willing to do the work.

> Another reason I was glad I joined Mickle School is athletics. I love sports like basketball, football, and especially track. If you join sports, you'll make lots of friends.
>
> I only had seven friends I knew around my neighborhood that went to Mickle. My first couple of days were kind of scary, because I hardly knew anybody and some people who knew who I was would call my name and I couldn't hear them. And they wondered what's wrong with me. Later on, I got acquainted with them and now through the three years at Mickle almost every kid in ninth grade knows I'm deaf and most of them are my friends.

Professional teamwork was an essential ingredient.

Our success with Mike is the result of a team that has coordinated, planned, discussed, and attempted to accomplish whatever was needed to make Mike a happy, well adjusted student.

Mike entered Robin Mickle Junior High a year before Congress passed the Education for All Handicapped Children Act (Public Law 94–142) in 1975. He graduated in 1977 before the Act took effect.

In a way, Mike was lucky to be the first (and to this point, the only) acoustically handicapped student in his school. The entire staff was able to concentrate on finding ways to help him learn in spite of his particular problem. When a school has many handicapped students with varied problems, the time for such attention is hard to find.

The faculty's experience with Mike can help other pupils in the future.

Staff of the Lincoln schools are now planning for the integration of other handicapped students. Mike's attendance at Robin Mickle is a resource for their use. (Woodburn & Schuster, 1978)

Special and regular educators have developed practical ways to teach most hearing impaired pupils as members of regular class groups. This chapter illustrates the problems in doing that and how those problems can be overcome or minimized by members of the education professions working together with other specialists and with parents.

Health and Social Welfare Considerations

Knowledge of the medical/audiological distinction between hearing impairment and deafness is useful for all teachers in their interactions with health professionals.

> *Hearing impairment:* This is the most general term for malfunction of the auditory mechanism. It does not distinguish either the anatomical area primarily involved (central vs. peripheral) or the functional nature of the impairment (sensitivity, frequency range, discrimination, sense of loudness or pitch, recognition of meaning, and the like). In a medicolegal context "hearing impairment" implies a severity sufficient to "affect personal efficiency in the activities of daily living," specifically in respect to communication.
>
> *Deafness:* Deafness is the traditional term for a severe or complete loss of auditory sensitivity. . . . This implies a hearing loss sufficient to make auditory communication difficult or impossible without amplification. (Davis & Silverman, 1978, p. 539)

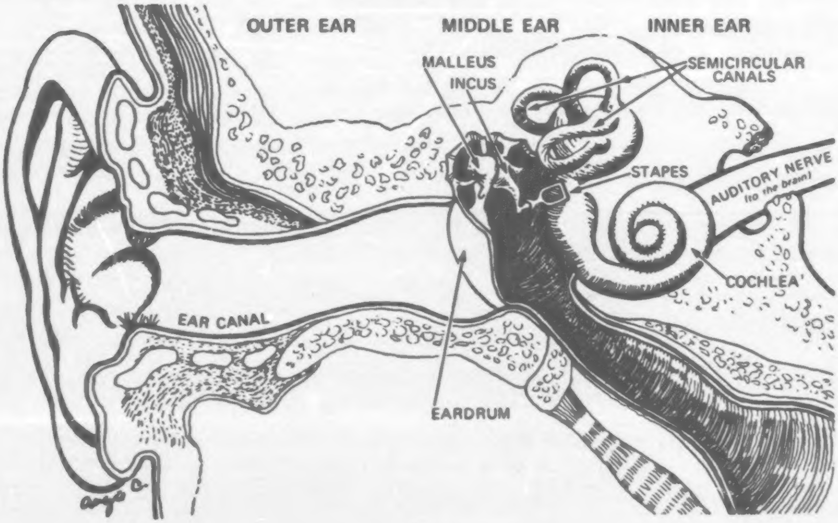
In order to communicate effectively with parents and with members of the health professions, teachers should also understand the hearing sense and its operations. The purpose of the external ear (Figure 11–1) is to collect sound waves and channel them inward through the ear canal where they strike the eardrum.

The middle ear houses three bones called, because of their shapes, the hammer, anvil, and stirrup (malleus, incus, and stapes). They transmit, as mechanical, jointed levers, the sound waves from the eardrum to the other end of the middle ear to a membrane called the oval window. The middle ear contains air, with the pressure regulated through the eustachian tube, whose other end opens into the throat.

Everyone should know how the ear works and how to protect it.

The inner ear (the labyrinth) contains fluid. The sound waves reach the oval window by mechanical transmission through movements of the three-bone linkage. The movements of the oval window set up waves in the liquid of the inner ear. It is here that the sound waves activate the auditory nerve. Its thousands of end fibers are attached to the roots of tiny hairs in the liquid. The hairs are stirred by the sound wave patterns in the liquid, energizing the nerve ends to form the sensation of sound. The component parts of this complex organ are illustrated in Figure 11-1. It allows one to trace the process of hearing through the reception of sound waves at the outer ear through to the excitation of the ends of the auditory nerve, which might be spoken of as the

FIGURE 11–1
Cross Section of the Hearing Mechanism



recognition of a sound signal. The actual perception of the sound and its integration into comprehension and memory are central nervous system functions that are not well understood.

The human auditory mechanism has two especially vulnerable points, the drum and inner ear. Awareness of these points helps to understand types of hearing loss and helps to safeguard pupils from common dangers.

Ear infections can cause problems.

Anything that prevents the movement of sound waves into and through the outer ear and the middle ear obviously creates an impediment to hearing. Children have often been warned: "Put nothing smaller than your elbow into your ear." Yet all manner of debris finds its way into the outer ear, sometimes causing scratches, infections, punctured eardrums, which in turn can cause permanent damage.

The middle ear is often invaded by infection-causing agents from the throat and nasal passages via the eustachian tube. Mostly these attacks are fought off by the body's natural defenses, with only minor discomfort and no lasting harm. But frequent repetitions of middle ear infections can bring about scar tissue and other changes that reduce the flexibility of the joints of the three bones whose job it is to transmit the sound waves, making it difficult or impossible for them to perform their appointed functions.

The inner ear, too, can be reached by infections carried through the lymph. They can damage the nerve ends of the hair cells in the cochlear region. Some drugs used in controlling infections elsewhere in the body are suspected of producing degenerative changes in the inner ear structures. Also, inner ear malfunctions can be associated with prolonged exposure to high intensity sounds, whether meaningful or noise.

In school, the following warning signs justify calling a child to the attention of parents or of school medical personnel because of a possible hearing problem.

All staff members and pupils should be alert to these signs.

The child:

1. Appears to strain to hear, including leaning toward the speaker and cupping the ears with the hands.
2. Asks to have comments or questions repeated and then gives correct responses.
3. Shows speech inaccuracies, especially dropping the beginnings and endings of words.
4. Is frequently confused during discussions, even though evidently trying to participate.
5. Has running ears, soreness, or aches and frequently rubs and scratches the outer ear canal.

A teacher's report may well prevent a hearing loss that could have a devastating effect on the child's educational development.

In society, hearing impaired persons have been exploited in a number of ways. They are underemployed, too often working at jobs below their levels of actual training. They have been the objects of crude jokes, and they have been preyed on by unscrupulous merchants.

> *"Hearing impairment is the leading disability in the United States. It affects more people than cancer, blindness, tuberculosis, venereal disease, multiple sclerosis, kidney disease, and heart disease* combined. *One out of 15 Americans is hearing impaired.... Even though it is the nation's most widespread impairment, the generally invisible nature of the effects of hearing loss has resulted in a dearth of public awareness and understanding." (Stewart & Chap, 1979, p. 1)*

Through social and political action oriented clubs and associations, however, they have successfully helped each other in matters from employment and recreation to education, insurance, and legislative lobbying. Some writers on the sociology and social psychology of hearing impairment speak of these groups as making up "the deaf community."

Hearing impaired people help each other.

The United States is also dotted with volunteer organizations, often called speech and hearing associations. They tend to be amalgams of professional persons, parents of hearing impaired children, public spirited lay citizens, and hearing impaired adults. Their staffs conduct public information campaigns on prevention of hearing defects, provide free hearing tests, act as direct assistance or referral agencies for hearing impaired persons, conduct demonstrations of education or other services they believe their communities need, and advocate for hearing impaired persons in whatever ways are relevant and necessary.

These groups are strong and useful resources for teachers for direct help in planning, tutoring, interpreting, and other instruction related matters. For broader considerations, such as helping to form and guide the policies and practices of state and local education agencies, they can have important roles. They are also potential employers of teachers in their various service projects.

It is not news to educators that communication between pupil and teacher and from pupil to pupil is absolutely necessary if effective instruction is to go on. The better the communication, the more efficient and productive the instruction can be. Interference with communication detracts from the quality and pace of instruction.

Educationally, the main problem is to teach language and the means to communicate it.

Communication is the core educational consideration with hearing impaired pupils. At the heart of the matter is the negative impact hearing impairment can have on the normal development of oral language. That is why educators and their helpers in psychology, linguistics, audiology, and speech pathology spend so much energy to improve the teaching of language in all of its ramifications to hearing impaired persons. The central focus of special education for hearing impaired pupils is the development of language and communication.

Mainstreaming

Mainstreaming is achieved when children who need special education receive it on a high quality level while they enjoy the personal and social advantages of life in regular school classes with all other youngsters of their age and neighborhood. It means that high quality education is going on, too, for other pupils.

Until recently, the only widely used way to bring hearing impaired persons into the mainstream was to start them with intensive special education in preschool and elementary special separated schools or classes. Then, during the secondary, technical school, and college years, some were encouraged to attempt to attend schools with hearing students.

It is different now. Mainstreaming for deaf and hard of hearing pupils is coming to mean that special help blends from the preschool years with regular schooling with other children. Parents and teachers now start from the premise that the great majority of deaf and hard of hearing children can be educated from the outset in regular school and that they should be part of the school's mainstream, socially and personally, from the preschool years all the way through the formal education years. They do not have to begin on the outside and try to win their way into an educational and social setting where all the other children already are. This was predicted by McConnell (1973) when he wrote: "The rapid increase in early detection, infant and pre-school education, and day-class programs of higher quality should result in greater numbers of children able to join the regular education system" (p. 379).

Partial mainstreaming is best for some.

Not all hearing impaired children, of course, are served best by full mainstreaming. Some profit most from partial mainstreaming, separated for short or long periods of intensified special teaching. The decision is made in the following way.

The parents and child are encouraged toward enrollment in an augmented regular nursery, kindergarten, or first grade. *Augmented* means the school is organized, equipped, and staffed to maintain hearing handicapped pupils as full, participating members of the group.

If, after reasonable trial, the augmented regular class cannot satisfactorily meet all the needs of the hearing impaired child, consideration is given to another approach. That change need not be to total separation. Rather, it might be to a part-time schedule in a resource room or clinical setting or to full special education staffing while the child remains in the same regular school in visual contact and in a substantial and meaningful degree of social contact with the other pupils.

Technology and Special Procedures

Devices and procedures to encourage communication are under constant development.

A rich educational technology relates to teaching hearing impaired pupils. Many will wear hearing aids, for instance, and they are important elements in that technology. Understanding what a hearing aid is and does can help in teaching.

Hearing Aids

The regular class teacher can ask the special education teacher to demonstrate two or three different hearing aids and to explain how they work. It will be seen that they are basically similar. First, there is a device for picking up sound (a microphone). Second, there is a mechanism for making the sound louder (an amplifier). And third, there is a part that delivers the amplified sound to the hearing impaired person (earphone or speaker). The whole thing is energized by electrical batteries, resulting in a relatively lightweight yet powerful instrument.

Agreements in advance can prevent problems.

For best use of this piece of technical equipment, the regular class teacher needs agreement on certain matters with the special education teacher and the child's parents.

1. Hearing impaired pupils will be prepared, to the extent their ages permit, to take responsibility for ordinary care of their hearing aids and will know how to use their aids.
2. The special education teacher will be on call to help with trouble shooting occasioned by problems with any aids.
3. The special education teacher will notify all concerned if there is to be any change in how or when a child is to use an aid.
4. The special education teacher will be kept up to date on how the child is complying with the prescribed use of the aid.

The regular teacher can also make constructive use of the natural curiosity of hearing pupils about aids by asking the special education teacher to prepare one or more lessons for the class on hearing aids. The level of complexity would need to fit the capabilities and interests of the hearing pupils. Children of nursery and kindergarten age, for example, tend to be less distracted than older children by such matters as hearing aids worn by their companions.

Instructional Aids

The design of instructional materials to help hearing impaired pupils has concentrated, naturally enough, on the language arts. The most widely used item is called the Fitzgerald Key (Fitzgerald, 1954). It uses a set of visual symbols and sentence examples to encourage accepted grammatical construction in oral and written speech. To monitor the system such questions as "Who?" "What?" "Where?" and "How many?" are cued in visually.

Adding printed captions to modern instructional or entertainment films has proven a helpful use of contemporary technology for assisting deaf pupils in learning. Started in 1958 through federal funding support, a substantial library of such films is now available for loan.

Improvements appear every year.

The federal support originally allocated for captioned films has broadened greatly. It now embraces educational media development on a national scale, development work in programmed instruction, educational television, personnel training, and equipment for use not only in schools but also in the homes of hearing impaired persons. One recent development is the adaptation for home use of teletype and telephone systems to allow communication by print rather than spoken word between hearing impaired persons or with hearing persons.

The visual communication system used by most American deaf people is, in the scientific and technical sense, a language. *American Sign Language (Ameslan) is not simply signed English. Actually, according to Fant (1972) its structure has more in common with Chinese. Signed English (Siglish) presents signs, interspersed with finger-spelled words, in the phrase patterns of English. Ameslan uses identical signs but orders them in unique sequences. Most deaf persons use either Ameslan or Siglish, because they have learned to read and write English and are familiar with its structure. Because English (or Siglish) has been learned as a second language (and against almost incredible odds), deaf people understand and can use it to some degree. They comprehend in a general way what is presented in Siglish, but in Ameslan the message comes through fully.*

Other impressive technological advances are being made in the way the low frequency and limited residual hearing of most hearing impaired pupils can be enhanced and used to help them acquire language. Hearing aids can now capture and convert between the low frequencies and higher levels to improve audibility, for example. It yet remains for relatively fail-proof miniaturization to be made practical, but that may not be far away.

While not originally designed for hearing impaired pupils, books written with high interest appeal and low vocabulary loading have been found useful. They maintain motivation and bypass limited reading abilities. Thus, their use encourages gains in concepts, understanding, and information despite the limiting impact hearing impairments can have on general language development.

Special education personnel can help locate resources.

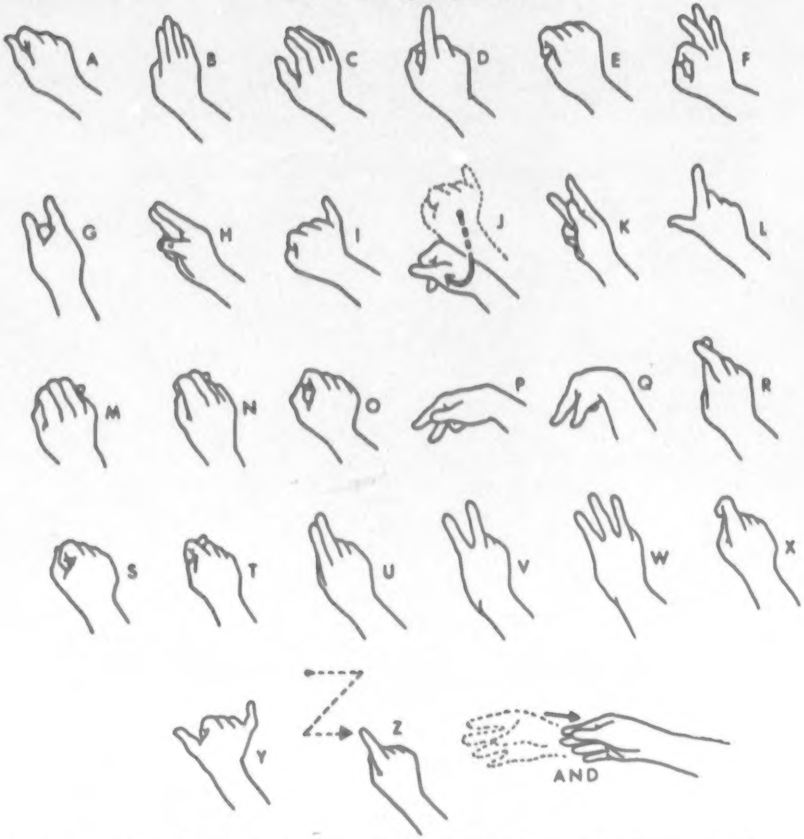
Access to these and many other specialized instructional materials can be made available in any community. Local special education personnel should be familiar with nearby resources and those distributed from national centers. Regular class teachers should also ask for consultation from their colleagues to learn about materials with which they might not be familiar. Regular class teachers often find they can also make effective use of these devices with children other than those for whom they were originally intended.

Visual Channel Communication

Ameslan, or American sign language, another element of special technology, uses signs to represent concepts, not words. As in English, where a word represents a concept (i.e., time), in Ameslan a sign represents a concept (i.e., a finger pointing at a wrist watch or the place where a wrist watch should be, if worn). Ameslan is a form of manual communication.

Manual alphabet refers to an alphabet with a one to one relationship of finger positions of one hand and the 26 English letters (see Figure 11–2). Using the manual alphabet, English words can be spelled and sequenced into sentences as a direct substitute for English speech or writing. Punctuation can be shown, also.

FIGURE 11-2
The American Manual Alphabet
(as seen by finger speller)



Source: L. J. Fant, Jr., *Say It with Hands.* Washington DC: Gallaudet College Centennial Fund Commission, 1964, p. 1. Reprinted with permission.

Methods of Teaching Language

Methods of teaching language and communication, increased interest in sign language, improvement of school achievement, and increased interest in hard of hearing pupils stand high on today's agenda. Two language approaches contend for dominance: manual and oral.

Many deaf children acquire good oral speech and speechreading skill under proper instruction. Conventional wisdom has it that well functioning oral communication can be taught only if there is a start in the first years of life; no exposure to sign or finger spelling; maximum use of residual hearing; 24 hour a day focus on deliberate oral communication; social and educational activities primarily with hearing persons; and a positive, supportive, yet firm attitude toward the child's use of oral speech and speechreading. The sheer logistic barriers to maintaining these requirements over the years of childhood may account for the apparent reduction of interest in a solely oral approach.

A total communication approach is currently favored.

Total communication, which combines oral, sign, and finger spelling, currently receives favorable attention. Suppes (1974), in a succinct review of the research, made a germane remark regarding the contention between advocates of the manual versus oral approaches to communication.

> It is hard to think of an area [methods of teaching] in which really careful and extended experiments would be of more use, for there is a long tradition of support of each position. Until recently, the oral position was probably the dominant one, but in the last few years there has been an increasing interest in the respect for what has been achieved by manual methods beginning with the very young child. (p. 145)

The growth in use of sign language stems from four sources. First is the conscious promotion of total communication, which combines the use of oral speech, speech reading, sign, and the manual alphabet in teaching deaf pupils.

Second is the increased proportion of deaf and hard of hearing pupils who attend regular classes. Given that daily close contact, hearing pupils and their regular teachers find it interesting, useful, and not difficult to learn sign. Often it is taught as an inservice unit.

Third is the more frequent translation of television news and features into sign by superimposing a signing person in a corner of the screen. This has markedly increased the access of those programs to persons who understand sign. At the same time it has made knowledge of sign more valuable to all hearing impaired individuals. Further, the increase in public visibility of sign language increases public understanding and acceptance of manual forms of communication. Another related result: those who use sign and manual alphabet are less often the objects of curiosity.

Fourth, sign language is increasingly employed in other phases of special education. It has opened communication channels with physically handicapped, autistic, aphasic, retarded, disturbed, and other persons whose oral expression is limited.

Mainstreaming can work with any language and communication system.

Mainstreaming is effective in oral teaching programs and in total communication programs. There is one fundamental difference between the two. The oral method requires that the pupil learn lipreading (speechreading) and oral speech as the *only* means of communication in face to face situations, whether with hearing persons or deaf or hard of hearing persons. No gestures or movements are allowed other than those ordinarily used by hearing persons to supplement ordinary conversation.

The total communication approach also teaches the pupil to become skillful in lipreading and in oral speech. In addition, the pupil gains proficiency with communication by the manual alphabet (finger spelling) and sign language. The more detailed sign system used in total communication uses positions and movements of the hands and arms in relation to each other and the rest of the body to convey concepts, including things, places, actions, emotions, quantities, prefixes, suffixes, and other language nuances. Manual alphabet and sign are both used by the person speaking, with the manual alphabet called on to supplement the information conveyed by signs where necessary, such as in proper names. Teachers and pupils who are listening observe the speaker's lip and facial movements, the signs, and the manual spelling, when it is used.

Regular class attendance is possible.

Children educated by the oral approach attend regular classes if they are skillful in oral language and lipreading and if their scholastic achievement is comparable to that of at least some of the hearing pupils. The same is true for pupils prepared by the total communication approach, for they acquire oral language and lipreading competencies, too. In the latter case aide–interpreters are part of the staff complement.

Some hearing children and their regular teachers deliberately learn manual communication and sign in order to better communicate with the hearing handicapped pupils who have been prepared through total communication procedures. Both regular teachers and hearing pupils seem to acquire basic sign and finger spelling skills rapidly.

When the same school system offers parents the choice of the method to be used with their child, it is necessary to keep pupils in the two programs separated. Otherwise the children in the oral group tend to learn sign language and finger spelling from those in the total communication group and to use them for manual communication.

The Person Who Is Called Hearing Impaired

This incident from the life of Dr. James Marsters shows that hearing impaired persons can be creative contributers.

Teletype Phone Network Helping Deaf Reach Out[2]

A handicap can spark creative contributions.

☐A Pasadena dentist, who has never heard a spoken word, has made it possible for 14,000 deaf people to carry on conversations over the telephone. Dr. James C. Marsters inspired the development of a communications system that combines the telephone with the Teletype machine. Deaf persons "talk" to one another by punching teletypewriter keys. Their messages are carried from one teletypewriter to another via the telephone.

An orthodontist, Marsters, 51, is one of only three totally deaf persons in this country ever to become a dentist. Since birth he has lived in a world of complete silence. Yet, like many born without hearing, he has learned to master speech, using words he has never heard himself. He "hears" others by reading lips.

"A telephone for those deprived of hearing is often a matter of life and death," Marsters explains. "Imagine waking up at 2 in the morning and finding your wife having a heart attack. You are deaf. You run to a neighbor and start pounding on his door. The neighbor has no idea who's at the door. He shouts—'Who is it? Who is it?' You can't hear him, you don't answer. He doesn't open the door. He doesn't know who it is.

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[2] From the *Los Angeles Times*, Dec. 7, 1975. Copyright © 1975 by the Los Angeles Times. Reprinted by permission.

"What do you do? You are stuck. Multiply that by 1,000 times. It gets serious. You can't reach out when there's a need to reach out."

Collaboration produced fruitful results.

In 1963, Marsters sought out Robert Weitbrecht, a deaf astronomer and electronics engineer. "I was so frustrated trying to use the telephone," recalled the dentist. "I had heard of Bob Weitbrecht's expertise in electronics. So I flew up to San Francisco to talk with him and see if we could come up with a telephone for the deaf. We worked together for months and finally came up with the equipment we now have.

"Teletype machines were being phased out by the telephone companies, Western Union and other firms and being replaced with computers. We found a way to put the Teletype machines to work for the deaf."

The two men formed an all-deaf owned and operated company, Applied Communications Corp., headquartered in Belmont in the San Francisco Bay area. Marsters is president and Weitbrecht is vice president of research and development.

Out of their research came the Phonetype, a device that converts telephone signals into teletypewriter signals and vice versa. When the phone rings in the home or office of a deaf person who has a teletypewriter and Phonetype, lights go on and off. If a person is both blind and deaf, fans go on. The deaf-blind person uses a Braille teletypewriter.

Research led to practical help.

When the phone is lifted off its cradle and placed on a recess in the Phonetype—a small black box—the teletypewriter is activated. Then a message from the caller begins to appear on the receiver's teletypewriter. The message is punched out by the caller.

The person receiving the message responds by punching out his message on his teletypewriter keyboard. And the conversation goes back and forth throughout the length of the call.

In 1968, the Marsters-Weitbrecht project was given a boost when American Telephone and Telegraph Co. agreed to donate surplus Teletype machines to deaf people through the Alexander Graham Bell Association for the Deaf, Inc. (Alexander Graham Bell's wife was deaf).

That same year, Marsters, Weitbrecht, and others from the National Association of the Deaf and the Alexander Graham Bell Association for the Deaf formed Teletypewriters for the Deaf, Inc. (TDI), a nonprofit organization.[3]

Teletypewriters for the Deaf published its first directory of people with teletypewriters and Phonetypes in 1968. There were 174 listings. Today the directory carries more than 14,000 listings (Hillinger, 1975). ☐

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[3] A national consumer products safety hotline using teletype equipment is 800-638-8270 (Maryland, 800-492-8104).

Hard of hearing children and adults who function well with hearing aids can also use the telephone because their aids have built-in devices called telephone switches, or "T-switches." More and more American phone receivers are compatible with the telephone switches, allowing hard of hearing individuals access to that increasingly fundamental means of communication. It would be helpful if all telephone companies installed receivers that work with hearing aid telephone pickups.

The Function of Hearing in Learning Language

Standard modern practice with newborns and infants includes efforts to determine if there is defective hearing. The obvious reason is to identify and correct, if possible, any problems.

There is an equally important educational reason. If infants have significant hearing losses in the speech-sound range, and if they do not receive special instruction, they will become victims of the most serious educational handicap an otherwise normal human can have.

Hearing is essential to acquiring language normally.

- We learn to speak because we can hear.
- We learn to understand the speech of others because we can hear.
- But more fundamentally, we learn that there is such a thing as language, and we learn how to employ language to communicate because we can hear.

It is a serious matter that a congenitally deaf child, without special instruction, cannot *say* his name. It is also serious that the child does not really *know* his name. *But it is most important and most serious of all that the child does not know that there is such a thing as a name.* That most fundamental lack—absence of the most elemental concept of language—is the core of the educational problem. Language in all of its ramifications is what the child must be taught. To understand that fully, one must study the typical process of learning language.

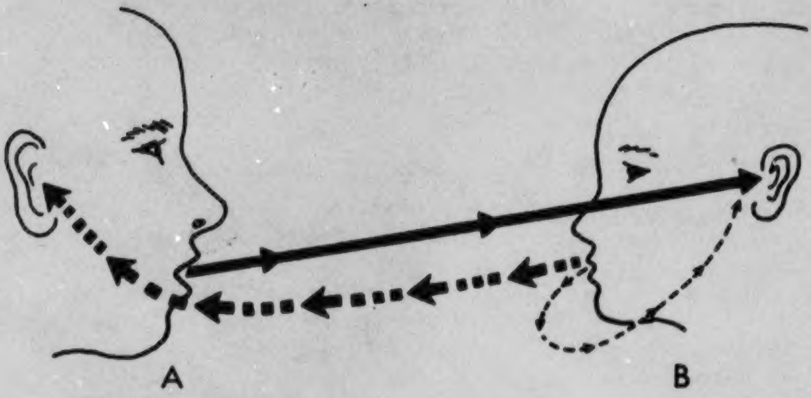
The Language Learning Process

Language comes naturally to infants and toddlers who can hear and who are not otherwise handicapped. The expression "comes naturally," stripped down to its essence, is illustrated in Figure 11–3.

Adult-child interaction aids in language development.

Speech sounds are produced by A, the adult. (See solid line.) They enter the ears of B, the baby, and are perceived, that is, transmitted to the brain and recorded there. Sounds produced by B, the baby (see dotted line), are transmitted to the adult's ear, who already knows language and can compare the baby's sounds with known (to the adult) words or approximations of words. When the baby produces a sound that is close to that of a word, the adult often repeats it back, delightedly, or otherwise shows pleasure selectively in favor of wordlike sounds. Thus, the baby is aided in forming and repeating and becoming skilled at producing the sounds of the adult's language.

FIGURE 11-3
The Language Learning Process



The baby's hearing is already involved importantly in the transaction. If the baby could not hear, or heard imperfectly, there could be no perception of the adult's sounds in the first place. In the second place, there could be little or no knowledge of the meaning of the adult's reactions to sounds produced by the baby.

Hearing allows self monitoring of sounds.

Hearing plays another role in very early life, too. When the baby utters sounds they are heard through the baby's ears almost simultaneously (see line of dashes). Thus, the baby's hearing provides the added capability of self monitoring of speech sounds. Given the assumption that the baby has the remembered perception of an adult-produced sound, it is now possible for the baby to practice alone and to find satisfaction in matching sounds uttered to those remembered.

The crucial role of adequate hearing in all of this is plain. Without hearing on the baby's part there is a gap in the line of oral-aural communication and a similar gap in the monitoring line; the normal language learning process is stymied.

Much more could be said about this process. Meanings get attached to spoken sounds along the way. Normal language development moves very swiftly in the earliest years. Hearing is important also for learning about music, about the sounds of nature, and for a multitude of other reasons, including safety, in our world.

But *the essential fact being emphasized is that adequate hearing in the speech range is a fundamental requirement for normal language development.* Its absence can cause one of the most devastating disabilities to which humans are heir. Fortunately, there are ways to ameliorate the impact of deafness on the general development of the child and on the child's education, specifically. They will be noted later.

Educational Classification

The distinction, for educational purposes, between deaf and hard of hearing pupils is in terms of how they learn language. Children with little or no hearing in the first year or two of life do not learn language in the natural, informal way most children do. They are regarded as deaf. Hard of hearing children, on the other hand, have significant hearing losses but do hear enough to learn language in the usual way, though imperfectly. By using this kind of grouping one can predict that deaf pupils will usually need more special teaching than will hard of hearing pupils.

Northcott (1973) pointed to the problem of definitions that make prophecies about personal development, social behavior, or about where and how hearing impaired pupils ought to be educated. She indicated that she prefers the inclusive term *hearing impaired.* Explaining why, Northcott said,

Definitions should clarify meaning—not predict limitations.

> The general term *hearing impaired* is used deliberately because it is relatively neutral in emotional content; it does not arouse automatic prediction of the level of personal, academic, or social performance that will be achieved by any students whose hearing loss may range from mild to profound by audiological assessment and audiogram. (p. 2)

Further, she said,

> There is ample evidence in current literature and research that the terms *deaf* and *hard of hearing* are diagnostically and psychologically unsound as a basis for judging how well a hearing impaired child will perform in the classroom. The focus today is on labeling not the child but the supplementary services and resources personnel . . . required to assist the child and his family. (p. 5)

In 1975, the Conference of Executives of American Schools for the Deaf, jointly with the Convention of American Instructors of the Deaf, published an authoritative statement on definition. The Ad Hoc Committee's recommendations on definitions are reflected in our use of terms. In particular, for educational consideration, we emphasize the importance of this distinction:

> *Prelingual deafness:* deafness present at birth, or occurring early in life at an age prior to the development of speech or language.
> *Postlingual deafness:* deafness occurring at an age following the development of speech and language. (p. 509)

Educational considerations are apparent.

The concepts embodied in these 1975 definitions are light-years in advance of those that appeared only a short decade before. That observation is reinforced by the Ad Hoc Committee's indication that full integration can be feasible and appropriate for some pupils with any degree of hearing impairment, so far as "present-day implications for educational settings" are concerned (p. 510).

Hearing Loss Conditions That Influence Education

The educational influences of hearing loss stem from five factors. Technical advances have resulted in corrective procedures through which all have come increasingly under control.

Sounds Affected by the Hearing Defect

Many sounds such as the bass horn or the rumble of distant thunder are lower than most human voice sounds. Total loss of hearing for those low sounds interferes little with hearing for ordinary conversations. The same is true for sounds higher than those used for talking. Examples would be the tones of a piccolo or the shrill of a whistle. True enough, it is an inconvenience to miss those kinds of sounds or to hear them imperfectly. Loss of hearing of that kind does carry with it some educational problems that call for special instruction. However, *the most serious special educational problems arise when there is a hearing loss for the sounds ordinarily made by the human voice in conversation.*

Degree of the Hearing Defect

It is more difficult to focus one's listening than one's looking.

Assume that the child's hearing loss cuts across all or most of the speech range. If so, and if the loss is complete or almost complete, nothing that is said by a teacher or by any other person will be heard. That closes off all auditory perception for the pupil—a most serious problem, since most teaching and learning depends on hearing and responding to what is heard.

If the hearing loss is total, an ordinary hearing aid has no value. It would be like offering ordinary glasses to a totally blind person. However, if the hearing loss is not quite total, sometimes specialized hearing aids can help. But as with vision, if only a little remains, amplifying devices (hearing aids) cannot be expected to work miracles. At best, they allow the child to hear a little more, though what is heard will usually be quite distorted. All sounds in the environment are made louder, not just the voice of the person speaking. And it is much more difficult to "listen to" something specific, shutting out the rest, than it is to "look at" something specific and attend to nothing else.

Learning to use the aid is part of special education.

If the hearing defect is relatively limited, a hearing aid can make practically normal functioning possible. It takes real effort, though to learn to use a hearing aid well. Also, it takes practice to sustain good hearing aid use and the aid itself needs regular care and maintenance. All of that must be made part of the child's special education.

Onset of the Hearing Defect

A third factor of major significance is the age the hearing defect started. If a 15 year old loses all hearing, it is a matter of real concern. Yet it is not at all as serious as losing hearing while an infant or toddler. The 15 year old, other things being equal, has permanent assets that the infant will to some extent be denied, despite the most expert efforts to help attain them. Here is a list of some of those assets that early profound or severe hearing impairment make it extremely difficult for a person to acquire:

1. Knowledge of one's native language.
2. Clear oral speech.

3. Understanding of the oral speech of others.
4. Ability to read with speed and comprehension.
5. Understanding of abstract concepts.

Becoming deaf at age 15 would take none of those away except the third. And with the other four, to acquire proficiency at lipreading (speechreading) would not be an insurmountable task.

Early loss of hearing inhibits all linguistic development.

But imagine beginning life with no means to make contact with others through sounds! When one recognizes that adequate hearing is the key to all five of the above qualities, the importance of the age at which hearing is lost becomes clearer.

The three factors named so far all have to do directly with how hearing impairment can affect the educability of a child. The relationships of these three factors can be summarized in the following statements:

- *The more the sounds in the speech range are blocked out by the hearing impairment, the more serious the special education problem.*
- *The nearer the hearing impairment to complete loss, the more serious the special education problem.*
- *The earlier in childhood the hearing impairment starts, the more serious the special education problem.*

Two other factors rank high in significance even though not related directly to defective hearing. One concerns the pupil's cognitive development and the other the instruction received in early life. Proper instruction in early childhood can have positive effects on cognitive development. Thus, these factors are often linked.

The Hearing Impaired Child's Cognitive Development

Keep a positive and dynamic attitude toward potential for learning.

One can easily underestimate the intelligence of hearing impaired youngsters. To those unfamiliar with the impact of hearing loss, such children are frequently thought to be mentally retarded. Therefore, it is fundamentally important to *get the professional opinion of a school psychologist and of special educators with experience in working with hearing impaired children.* Anything short of assessment by that kind of psychologist and special educator is likely to result in a false impression that can lead to serious and permanent curtailment of the child's educational opportunities. Often young hearing impaired pupils need weeks or months of patient work by the school psychologist and teacher, acting as a team, before the full extent of the child's intelligence can be brought out. Taking that time can be the most important investment ever made on the child's behalf.

The Nature and Amount of Stimulation Provided

The fifth factor of major significance is the kind and amount of stimulation the hearing impaired individual has received. Babies born without hearing

Stimulation prevents deterioration.

babble in the first months of life just as hearing babies do. That soon stops, however, unless it is encouraged by the adults around the baby. Similarly, in older children, language comprehension can decline when a hearing loss develops. The speech quality of the person who is losing hearing will also diminish. However, if regular, conscious efforts are made to encourage the baby's babbling and other kinds of striving for communication and to bolster and maintain the older child's language development and speech quality, the problems associated with hearing loss can be minimized.

Thus, two more summary statements can be added.

- *Hearing impaired children will more likely profit from special education if a dynamic view is taken of intellectual potential, with continuing efforts being made to reveal, develop, and employ the child's cognitive capabilities.*
- *Early, orderly, and regular stimulation of language comprehension and communication maximizes the constructive impact of special education.*

Prevailing Versus Preferred Practices

New roles for the residential and day school are emerging.

Preferred practices for hearing handicapped children coalesce around two broad moves. One, a pragmatic view, says that teaching a system of language in the earliest childhood years is of overriding importance. Second, a new position is emerging for the residential and day school as a regional resource, a research agency, a training promulgator, and a school specializing in intensive work with hearing impaired pupils with the kinds of complex educational problems which defy solution in the mainstream. The residential and day school, we believe, will remain and grow in strength as they take on new roles such as these and others not yet envisioned.

Prevailing Practices	**Preferred Practices**
1. Children with severe to profound hearing impairments are detected, for the most part, in the first year or two of life. Other losses tend to be located later, usually near admission to kindergarten or first grade.	1. Educators press for regular and repeated screening from birth, emphasizing very early discovery and educational intervention.
2. Otologists, audiologists, nurses, and psychologists are the contacts parents tend to have when they are learning about their children's hearing impairments and beginning to make plans for them.	2. Teacher specialists in very early childhood education (birth to 3 years) representing the local school system work directly with parents from the time the hearing loss is discovered, coordinate educational planning, and make use of otological, audiological, and psychological findings in doing so. The parent has a tie to regular

Prevailing Practices	Preferred Practices	
	and special educators from the local school system from the time the hearing loss is found. Care is taken to match learning tasks to the child's rate and level of cognitive development.	
3. Free public education for hearing impaired pupils with severe and profound losses is available in a few states from as early as the condition is detected and in several states beginning at age 2. Many states have not yet arranged for schooling for these children before standard admission age for all children.	3. Education for all hearing impaired pupils is free and public, beginning at any age hearing impairment is found.	*Focus on preschool education becomes widespread.*
4. Educational guidance in the preschool years emphasizes sound and intensive auditory training by audiologists or speech and hearing clinicians in one to one or small group clinical settings.	4. Preschool educational guidance stresses participation with hearing children and their families in all normal developmental activities while using sound amplification and receiving intensive auditory training from qualified specialists.	
5. The local school system becomes aware of the existence of most of its preschool hearing impaired children when they reach legal school entry age. Preschool educational programs, where they exist, tend to be operated by volunteer agencies.	5. The local school system deliberately seeks hearing impaired children in the first weeks and months of life and accepts responsibility for all aspects of preschool education for them and their parents. Qualified teachers conduct the education. Volunteers help in teaching, in supplying services that supplement education, and as innovators in demonstrating new directions the school might take to make program improvements.	*Local schools assume early responsibility.*
6. Parents immediately confront the choice of oral or total communication for their child. Acceptance of one separates the child and parents from children and	6. Parents receive objective information about differing forms of instruction. They have options about which they elect for their children and may transfer from	

	Prevailing Practices	**Preferred Practices**
	adults who espouse the other. Professional persons take sides in acrimonious conflicts over the forms of instruction.	one to another at their own initiative. School systems have qualified staff who work effectively across forms of instruction.
Instruction at home and in the regular class is stressed.	7. At school admission time parents in rural and small town settings send their severely or profoundly hearing impaired child to a boarding school or to a special class that calls for a daily bus ride to a different school from that attended by the rest of the family. In many cases the same is true of parents who live in large cities and suburbs.	7. Teachers and aides instruct infants and toddlers at home if parents wish. When mature enough for school, hearing impaired pupils attend the local school or a nearby regular school. The special education they need is brought to them in the regular class context. Clinical otological, audiological, and psychological work, if needed, is done mostly outside regular school hours.
Parents take an active role in planning.	8. Children with mild to moderate hearing impairments usually have special education from speech therapists in their local schools. The therapists ordinarily take the child out of class to give 20 to 40 minutes of corrective and remedial language and speech instruction each week, and to monitor the child's hearing aid use if one is worn. They advise teachers about favorable pupil seating and stay alert for other special needs of the child. There is little or no direct contact with parents. Often the speech therapist's training and experience with hearing problems is limited or nonexistent; in some cases, however, the therapist's preparation is excellent.	8. Educational programs are individualized. Plans are prepared in writing by a team and are coordinated by the regular class teacher. Specialist teachers work with children in the context of the regular class rather than removing them, in most instances. Parents take an active part in preparing program plans, give their approval to them, and often work at home with their child under the regular teacher and therapist's supervision.
Mainstreaming becomes the preferred practice.	9. Most hearing impaired pupils of all degrees of hearing loss are separated from regular classes and other classes for part or all of each day, all year long. Relatively few severely or profoundly hearing impaired pupils (deaf pu-	9. Special educational help outside the regular class is given when needed, and may extend to periods of full time attendance at residential schools. Generally, however, mainstreaming is practiced full time or most of the time.

Prevailing Practices	Preferred Practices	
pils) move into the mainstream for any of their formal elementary or secondary education.		
10. Many, perhaps the majority, of speech and hearing specialists and teachers of the hearing impaired have training or experience only in their specialities. Regular class teachers only occasionally have backgrounds that ready them for helping hearing impaired students in their regular classes.	10. Specialists in the education of the hearing impaired or in speech and hearing are drawn from a pool of professional educators who have training and successful experience as regular class teachers. Regular class teachers have inservice or preservice training to prepare them to instruct hearing impaired pupils in the mainstream and for coordinating and using the help of specialists.	*Regular teachers receive training.*
11. Few special classes, day schools, and residential schools have facilities for hearing impaired children with additional exceptionalities (giftedness, social or emotional maladjustment, mental retardation, other sensory or physical problems) from the point of view of staff preparation, physical plant, curriculum adjustments, and instructional materials.	11. Resources are available in the school system or special class or residential school and can be readily mobilized to accommodate multiply exceptional pupils, and the attitude is favorable toward doing so.	
12. Liaison between regular elementary and secondary education and special classes and schools for hearing impaired pupils is minimal. There is little mingling for professional, educational, or social reasons between the staffs or the pupils of the two.	12. Specialists in the education of hearing impaired pupils view themselves as close working colleagues of regular class teachers. They meet together frequently on professional and on educational matters concerning themselves and their pupils.	*Specialists and regular teachers are partners.*

Reaching Hearing Impaired Pupils in Sparsely Populated Regions

A significant problem for which preferred practices are not yet clear is how best to reach hearing impaired pupils who are isolated by natural conditions like geography and climate. In many parts of North America centers give counseling and training to parents of hearing impaired children. Yet families residing long distances from centers have little opportunity for direct contact

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There are all kinds of mainstreaming. Ken Killian, a 6 foot, 183 pound, 16 year old sophomore, plays first string middle guard on Baldwin High School's football team, in his home school district. During the day he attends the Western Pennsylvania School for the Deaf, where he lives during the week. His parents shuttle him back and forth to practice sessions.

Baldwin employs a complex, continuously maneuvering defense. They switch plans half the time at the line of scrimmage. How does a player like Killian handle such situations? The linebackers give him hand signals. They touch different parts of his body, which tells him what to do. The signals are changed weekly.

The coach says: "At no time do we accept his being deaf as a handicap. A kid without desire and mental toughness has a handicap. Killian has desire and mental toughness. When he makes a mistake, he makes it in a football sense." There haven't been too many of those so far. (Adapted from Fisher, 1980)

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with them. Newfoundland, Canada, where distance, geography, and severe weather conditions sharply limit travel, developed inventive ways to bring special education to preschool age hearing impaired children in their home communities.

A home-centered design serves preschoolers in remote areas.

A home-centered design started in 1977–78, combining instructional sessions and videotapes with periodic telephone talks with teachers. Beginning with children who were educationally deaf, it expanded to take in children with any degree of hearing handicap, plus those with multiple handicaps.

When an eligible child was located, the parents received a letter describing the program and inviting family members and relatives in close daily contact with the child to attend a meeting to become fully briefed. Also, the education or health professional nearest to the family was approached. These professionals, often speech therapists or nurses, were asked to assist the family in getting to the meeting, help collect information about the child, and encourage the family to participate. Telephone contact was maintained by Center staff with professionals and families. Financial assistance was available to help the family travel to the general meeting.

Equipment is supplied to parents.

Following a workshop with the families at the Center, auditory training equipment and videotape equipment was supplied to each home. Videotaped presentations were sent as needed for home viewing and practice. There ensued weekly parent-teacher telephone contacts, an annual home visit by a teacher from the Center, and attendance at another workshop at the Center a year later.

The 48 videotapes available the first year had five objectives in common. They encouraged the parents to acquire these attributes of good teaching:

(a) Skill in choosing materials for one-to-one teaching sessions, which would be suitable to the child's level of development and . . . interest,
(b) Skill in maintaining control of a one-to-one teaching session,

(c) Initiative in extending the techniques taught on the tapes to day to day situations,
(d) The ability to involve other members of the family in one-to-one teaching sessions, and
(e) Skills related to the discipline of the hearing impaired child. (House & Neville-Smith, n.d., p. 29)

Telephone contact solves problems.

The once-a-week telephone call to parents from the Center assisted in solving problems, reinforced and added to material in the videotapes, and recorded pupil progress information. Parents used the telephone contact for troubleshooting, as needed.

Twice a month a "More Ideas" booklet was sent to parents. These supplemented the videotapes and recommended ways to use toys, games, and ordinary home activities to strengthen language.

The annual home visit by a teacher from the Center was both social and professional. It revived the images of the people attached to the telephone voices and it allowed direct validation checks on the child's progress. During the home visit the teacher renewed the relationship with the family's local contact person, the professional whose onsite monitoring served as another resource and advocate for the family and Center.

Technology and family involvement support mainstreaming.

From the points of view of feasibility, pupil progress, cost, and acceptability, the evaluation of the program is positive (House & Neville-Smith, n.d., pp. 83–94). It offers an excellent illustration of how to combine professional skills, modern communication and instructional technology, community support and advocacy, and family participation that brings appropriate special education to preschoolers while they continue to grow and develop in the mainstream of family and neighborhood life.

It may be that this special education design will prove to be an alternative preferable to daily aggregate instruction of hearing impaired children at a Center, even if it is otherwise feasible to bring the children together.

Current Trends

What are the principles basic to successful mainstreaming?

Telephone and personal interview followups were made in 1977 and in 1980 of successful mainstream programs reported earlier (Birch, 1975). Focus was on the question: What does it take to make mainstreaming effective from the point of view of teachers and those responsible for school organization and administration?

Five educational principles stand out:

Principle 1: Apply a preteach/teach/postteach strategy.
Principle 2: Teach toward hearing-world participation.
Principle 3: Have a planned, organized, systematic approach.
Principle 4: Have unified and consistent commitment and direction.
Principle 5: Bring special education into the regular class.

Each principle is explained and illustrated below.

Principle 1: Apply a preteach/teach/postteach strategy. When this principle operates, there is a close, cooperative instructional team relationship among regular and special teachers of the hearing impaired. With minor adaptations the following illustration generalizes to residential, day, or regular public or private elementary schools, and applies with any form of language instruction.

Fourth or fifth graders are studying *Robin Hood.* The regular teacher's lesson plan calls for (among other things) discussion of a thought question: Why did *Robin Hood* and his men believe that they could not expect to receive justice at the hands of the Sheriff of Nottingham? The teacher of the hearing impaired, as a matter of course, reviewed the lesson plan with the regular teacher during an earlier planning period. The pupils had a homework assignment on *Robin Hood*.

The special teacher offers instructional support.

The special teacher meets the hearing impaired boys and girls for a 20 minute period sometime before their regular class to go through the upcoming lesson. The special teacher finds that some children are not clear as to the meaning of *justice.* Other hearing impaired children do know the meaning of *justice* but have difficulty with other expressions. The special teacher has the children discuss the terms with each other, monitoring the exchange to assure that the concepts are clarified. When the special teacher is satisfied that the hearing impaired pupils are ready for instruction on about equal terms with the hearing children, the preteaching is concluded.

The hearing impaired pupils then attend the regular social studies or literature class studying *Robin Hood*. (The regular teacher and the other pupils have previously been oriented to working with deaf and hard of hearing pupils in the class.) If the special teacher notes one or two matters that need particular attention in the lesson for certain children, they are passed on to the regular teacher by a note or in a chat as the class begins.

The regular teacher reports problems.

After class the regular teacher reports special problems encountered with the hearing impaired pupils. These are passed on by a short note, checks or comments on a checklist, a personal talk, or they may be transmitted by the pupils themselves. The special teacher then takes action as necessary in the postteaching session, depending on whether it is a behavior problem, failure in communications, a lack of preparation or background, or whatever.

The postteach time period is used flexibly. Its initial portion may be needed to top off the previous regular class lesson. Its latter portion might be employed to preteach key material for the next regular class lesson. Material related to more than one regular class lesson can be included. Other variations depend on the needs of the hearing impaired pupils.

The preteach/teach/postteach pattern carries on until the hearing impaired child becomes less dependent and more able to dispense with the preteach and postteach phases. Then the pattern changes from one of regular application of the preteach and postteach phases to one where the hard of hearing or deaf student seeks help from the special teacher only as the student feels it is needed. An important personal growth objective has been reached when that degree of independence is successfully shown by the hearing impaired student. The teachers, too, must sense when to let go.

This sequence (preteach/teach/postteach) forms an instructional principle whose day to day details vary. Some arrangements are highly complex, others simple. Some appear informal, others tightly structured and regularized. Some use time before or after the school day; some do not include all of the regular school program in the hearing impaired pupils' curriculum. Many involve parents, volunteers, buddies, or paraprofessionals in the process. But observation reveals the preteach/teach/postteach principle operating in some form in mainstreaming that works.

Principle 2: Teach toward hearing-world participation. This principle makes participation in the hearing world the focus of 100% of the instruction. Every moment of the school day plus much of the child's out-of-school time is taken up with planned instruction toward that goal.

Participation is the goal.

It is not a pressure cooker situation, however; the teaching is usually fun for the child. There is no unusual anxiety or excessive demand for performance. Learning is enjoyable and everyone participates.

Also, everyone teaches. That includes parents, aides, supervisors, regular class teachers, special educators, principals, social workers, psychologists, playground assistants—everyone having contact with the child.

There is not time for babysitting during, before, or after school. If children are in the charge of an aide, there is a definite responsibility for practicing, with each child, some skill or ability that is being consciously developed. The same is true for parents, real or substitute. There is a plan for each child. Every adult with the child knows what that plan is and accepts responsibility for furthering each child's education in an orderly and measurable way toward hearing-world participation.

Social interaction skills need to be deliberately taught.

There are times for fun, for games, and for unstructured romping. These are arranged so that hearing impaired youngsters also learn important attitudes and behaviors under pleasurable conditions.

An aide in one school said that "the deaf like to play by themselves." To prove the assertion, the aide pointed across the room to a group of seven or eight nursery-kindergarten hearing impaired children who were bouncing and swinging and climbing and whirling together on several pieces of indoor play equipment. There were two hearing children in the room, also. One was off alone in a corner painting at an easel. The other was at the periphery of the group of hearing impaired children, occasionally trying to enter part of the play, not quite making it, and retiring to the outside edge of the group again.

Earnest efforts were being made at that school to begin integration of hearing impaired children with others, but the principle, "teach toward hearing-world participation" was not in full operation. The effort toward mainstreaming was failing and those responsible did not know why. They had not conceptualized the principle fully, so they were not clear as to the implementation needed. They did not have understanding and participation by everyone. After several days of observation, these were the specific gaps in implementation that became apparent:

Can you turn these points around and make them positive guidelines?

1. Aides did not understand the integration effort because it had not been explained adequately.
2. The aides had not been given specific responsibilities.
3. Written plans were not available to help teachers or aides determine what to do with pupils.
4. Neither the hearing impaired nor the hearing pupils knew why they were together.
5. Aides were frequently with children for more than an hour with no supervision from a professional educator.
6. The aides initiated no communication with any of the children. Neither did they encourage communication the children initiated, except to stop disputes or misbehavior.

The concepts central to the principle were being violated. Precious time for the children was slipping away. Some children were having fun, to be sure. All of the children, as well as the aides, were certainly learning, but the wrong things. The deaf children were learning to ignore hearing children. The hearing youngsters were learning to live beside but not with the deaf and hard of hearing pupils. Aides were learning that their nonguidance and noninvolvement were completely acceptable to their supervisors, for none made any efforts to get them to change. The regular reward of money came every month. Intermittent rewards of smiles and friendly greetings came from superiors whenever the superiors' uncertain schedules brought them into fleeting contact with the aides. (Incidentally, aides were not alone in that behavior. Many teachers, parents, and supervisors were uncertain about the same matters.)

Planned action is needed.

Successful application of this principle calls for positive, planned action rather than laissez faire inaction. Effective mainstreaming requires that understanding and commitment be expressed 100% of the time in the day to day, hour to hour, moment to moment teaching activities of all who are in contact with the hearing impaired pupils.

Principle 3: Have a planned, organized, systematic approach. This principle says there is a design to the mainstreaming effort into which all the bits and pieces fit. It is planned; a document setting forth the plan is readily available. It also is organized; there is a discernible structure and individuals have assigned responsibilities. Moreover, those responsibilities are accompanied by the authority necessary to see that the responsibilities are carried out. Further, the approach to mainstreaming flows in orderly steps.

Mainstreaming plans are documented.

In some places, mainstreaming activities have not gotten beyond reflecting the individual interests of principals or teachers in individual schools. One community, for example, has a substantial portion of its hearing impaired children mainstreamed in the elementary grades. However, there was a mainstream plan only for the elementary schools. Children who had been mainstreamed in elementary schools often found themselves placed in special classes in junior and senior high schools, for no clear reason. The program design did not carry through.

Neither did policy, authority, or responsibility, for that was equally divided between elementary and secondary administrators who had differing points of view. It was a classic case of good ideas and worthy efforts losing their impact because of faulty planning.

A map and an itinerary help to navigate the mainstream.

Though it is necessary in the smallest school, this principle needs to be applied with maximum rigor in large and complex school systems. The principle gets excellent support when the state department of education promulgates detailed program guidelines. State guidelines help local schools draft documents specific to the community.

One ever-present danger, however, is that the plan, once crystallized, becomes inflexible. The document that outlines the school's plans should be updated periodically. With that provision, the plan can serve both as a reliable anchor and a motivating guide.

Principle 4: Have unified and consistent commitment and direction. Where mainstreaming is healthy and vigorous, the groups that form the power base of schools are together in their belief in it as the preferred pattern. The school board has policies that emphasize it. New and remodeled schools make provisions for the inclusion of regular and exceptional children. Personnel policies provide for employing teachers sympathetic toward integrating pupils. Professional staff receive inservice sessions on team teaching and consultation. Collective bargaining contracts contain clauses that specify recognition of factors involved in maintaining sound special education for exceptional children in regular classes. These examples, as well as others, show unity of commitment.

Those with decision making power must reach agreement and exert their efforts in the direction of mainstreaming.

Equally important is unified and consistent direction. Schools with serious problems in trying to get mainstreaming established sometimes lack power structure commitment. But more often they are without someone clearly in charge of implementation. Nothing discourages movement more than divided and inconsistent authority. Smoothly operating and thoroughly implemented mainstream programs have one person who clearly possesses both the authority and the responsibility for the program's management. The styles and management behaviors of persons responsible for implementation may vary. But one thing is certain: They and everyone else involved recognize who has been delegated the right to guide the program and where accountability for its proper conduct rests.

After a detailed account of thorough academic and social integration of 63 deaf pupils in regular school classes, Reger concluded: "Deaf children do need special assistance, but there is a thin line between assistance that facilitates personal growth and assistance that stifles growth. The history . . . suggests that too often . . . well-intentioned 'help' has turned into debilitating overprotection. Deaf children can be, should be, and want to be mainstreamed. . . . With a little help from their friends, they can make it." (Reger, 1977, p. 56)

Principle 5: Bring special education into the regular class. This says a great deal about the alterations in what teachers do when progressive inclusion for pupils with hearing impairments becomes the major pattern. To operate special education within the structure of the regular class and school spells change.

Local school efforts make the difference.

More and more, both deaf and hard of hearing pupils are receiving education in regular schools. Practical examples abound and are on the increase (Birch, 1975; Connor, 1976; Ling, 1977; Reger, 1977). Residential and day schools are changing, partly because of decreasing enrollment and partly because remaining enrollments contain a higher proportion of children with complex conditions that go beyond hearing impairment. But even children with complicated, multiple involvements can often be accommodated in their local school system, at least at the physical and social mainstream levels. In some school districts, close to 100% of all hearing impaired pupils are integrated with hearing pupils, with many being fully mainstreamed at the instructional level, as well.

The gap between separation and inclusion, if it is reduced further, means potentially wrenching alterations in the professional lives of many teachers who now work in residential schools, special day schools, and self contained special classes, to say nothing of the regular class teachers who will also be called on to make changes. Fortunately, enough has been learned from those teachers and pupils and parents who have ventured into the central current to engender confidence that it can be done by others without serious hardship.

Special education has been brought into the regular class by public schools and private schools, by residential schools and day schools, by elementary schools and secondary schools, by large school systems and small ones, by technical schools, by nursery schools, and by colleges. There is almost no end to the inventive variations on how it is done.

The Role of the Regular Class Teacher, Special Teacher, and Principal

Inclusion requires new patterns of professional behavior.

The inclusion of hearing impaired pupils means two kinds of change in work demands. One is new work, such as the added lesson preparation and the increased chalkboard use called for from the regular teacher. Second, special and regular teachers and principals have to learn to become a team. That change from relative isolation from each other means altering established patterns of daily professional behavior.

Where mainstreaming has worked out well, the extra work and the changes in work style incident to getting the program under way have been made rewarding. High quality inservice programs have been offered, many with credit for advanced degrees, advanced certification, and recognition toward salary increments. Teachers' aides have been furnished. New or remodeled teaching space, modern instructional materials, added audiovisual aids, and other improvements that make teaching more satisfying have been supplied. Teachers of regular classes have had access to more help from principals and supervisors. Also, they have received direct onsite consultation and assistance with regular class pupils from the special education teachers who work with them, frequently right in their own classes.

Teamwork with Specialists

When a child receives instruction, direction, and assignments from more than one teacher, confusion and conflict can easily arise. Opportunities for misunderstanding are increased, too, when children have language and communication limitations imposed by defective hearing. Thus, it proves important that there be clear and consistent role definition for the professional persons responsible for the various parts of mainstream schemes.

Role definition is essential.

Following are examples of statements of responsibility for certain professional positions that are intended to help clarify roles and functions of mainstream team members. (These can be generalized to work with other exceptional children and youth, too.)

Counselors (regular) are responsible for counseling services for all pupils, including those who are hearing impaired. They employ assistance from specialists trained to work with students who are hearing impaired, but they use the help as consultation and do not turn over counseling as such to those specialists.

Principals (regular) have authority and responsibility for both special and regular education in the school. They have a chief voice in selection and assignment of teachers and pupils; they use consultation from specialists in the school and on central office staff, but do not delegate decision making to them. Principals employ teacher committees and parent participation in planning and organizing individualized education for all children in the school.

All emerging professional role changes focus on coordination rather than separation.

Regular class teachers have the first voice in day to day decisions about educational programs for all pupils, including exceptional pupils assigned to a regular class. They have access to assistance from specialists on school and central office staff and have the authority to direct and supervise work of teacher aides assigned for fixed periods of time. They may call and arrange meetings of teacher committees concerning pupils in the class, with the concurrence of the principal. Regular class teachers may deal directly with parents, with the concurrence of the principal, or may make parent contacts through the school social worker or counselor.

Teachers of hearing impaired pupils help regular class teachers who have such pupils on their class rolls. They preteach and postteach. They accept referrals from regular class teachers for assessment and aid in planning instruction for regular class pupils who may need special education. They serve on faculty committees and make available special instructional materials to regular class teachers and hearing impaired pupils. They provide orientation and continuing education to all teachers regarding teaching hearing impaired pupils.

A number of others (i.e., school psychologists, school social workers, and various supervisors) could be added to the list. But this should be sufficient to show that mainstreaming involves some tasks not common to special education as it is traditionally conducted, and that different responsibilities devolve to the professional persons who participate.

One reason for keeping pupil accounting and related responsibility clearly in the hands of regular education personnel is to make sure that hearing impaired pupils maintain and increase their skills in pursuing real world resources. This should reduce the need for a special counseling center or similar services for hearing handicapped persons. It should not make the use of such services a matter of habit for hearing impaired persons, but rather it should strengthen their independence of those services.

Responsibility and accountability are linked.

Another reason is to prevent mainstreaming from becoming a fraud, with only the surface appearance of inclusion, while in reality all the education of the hearing impaired child is conducted in regular schools, but by specialists, with regular education personnel as onlookers or bystanders. Also, specialists with pupils who are hearing handicapped need reorientation to assist them in working in new relationships with regular school personnel. Only a few have training and experience in joint professional consultation with teachers from other educational specializations and with members of other professions; yet, that is a significant new skill required of them. The same is true of participating in committee decision making and team teaching. Thus, there remains an important need for reeducation for persons now prepared only for special education for hearing handicapped pupils in classic settings.

Bruce (1973) said:

> Integrated educational settings for the hearing impaired range from those that offer mere physical proximity with hearing pupils to those in which the hearing impaired children are completely independent of supportive personnel. A child may be integrated as early as 0–3 years or as late as high school age. The effective implementation of integration is dependent on the quality of personnel, equipment, transportation, and curriculum. (p. 213)

We agree that adaptations in the school system are the primary determinants of effective mainstreaming. We see little value in approaches that ask only, "Is the child ready to adjust to the school?" It is the school that should be more flexible. We add only that the school physical plant and methods of teaching, too, need attention if instruction is to be properly individualized.

Moving Hearing Impaired Pupils from Separated Settings

Bringing a child into the mainstream from a separate class or school calls for special care.

When a pupil in a separate program is considered for movement into physical, social, or instructional mainstream activity, these ten points merit consideration:

1. Particular attention should be paid to ability to take part in language, reading, writing, spelling, and conversation. Superior reading and understanding of the conversation of others can compensate for less satisfactory expressive skills, or the reverse. Also, being in a regular class can motivate speedy improvement in the skill with which hearing impaired pupils use their communication capabilities.

2. As to social and emotional behavior, the issue is whether the regular class teacher, having observed and read reports about the hearing handicapped youngster's typical behavior, feels the child can be fitted in or can learn to fit in with the regular class friendship groups and cliques. (It is good to begin mainstream activities at the start of a term, so that the hearing impaired pupil may be assimilated while social units are in the formative stages.)

Encourage peer interaction.

3. Does the student attend and follow directions well? Familiarity with the way the regular class teacher conducts instruction allows the special teacher to help the hearing impaired pupil sharpen necessary attending skills.
4. Some hearing impaired pupils are really able to perform well, but lack the self confidence, independence, and determination to desire regular class placement for themselves. With encouragement from teachers, they may find in the regular class the positive experience that bolsters confidence and helps them face the next of life's challenges with more assurance.

Promote self confidence.

5. There is no reason why mainstreaming should be reserved for hearing impaired pupils of average learning ability. Mentally retarded or gifted hearing impaired pupils should have the opportunity to take part in mainstream style special education programs with hearing mentally retarded or gifted pupils if other appropriate criteria are met.
6. It is preferable that the hearing impaired pupil's age be within two years of the average age of the group of hearing pupils. The child's chronological age is important, but if there is reason (e.g., if the child is unusually large or small or unusually gifted or talented) the two year age limit should be disregarded.
7. If the regular class teacher is well motivated and willing to try, that receptive attitude deserves equal weight with the teacher's understanding of the problems faced by a hearing impaired student.
8. It is seldom necessary to reduce regular class size to accommodate hearing handicapped pupils so long as the total class size, including the children with hearing impairments, does not exceed the typical class size for that school system.
9. Proper amplifying equipment should be on hand and the regular teacher should understand its operation.

Make use of equipment.

10. The parents should be aware of and willing to play their roles well. But the absence of such support (or even the absence of parents) need not hold an otherwise ready pupil out of the mainstream. Parent surrogates should be found to assist in the afternoon, evening, and morning.

These ten criteria are intended to be flexible. Teachers and the pupils themselves are best able to judge who can qualify for consideration for integration. *As a general rule, pupils need more opportunity to test themselves, rather than to be shielded from contacts with regular classes.*

Steps for Teachers and Principals

Following is a group of "teacher to teacher" comments and suggestions. Most come directly from professional educators experienced with mainstreaming. They found that their worries diminished when they kept to these guidelines.

Improving Communication

Improved communication encourages increased learning.

1. It is better, for understanding, to be near the hearing impaired child. That applies to the child's understanding of the teacher or other pupils, and the reverse.
2. Place the hearing impaired child so there is face to face visibility of the teacher's speech movements. The child should be free to change position or seats, as needed.
3. Use your natural gestures to supplement oral presentations, without exaggeration.
4. When referring to something in the room, point to it, nod in its direction, glance at it, or walk over and touch it. If discussing something in the room, manipulate it, to the extent possible, to synchronize with what is being said.
5. Take care not to talk when your face is turned to the chalkboard while you are writing, when it is turned down to see your notes, or when it is hidden by a book or papers or by your hands.
6. When showing films or slides, keep enough light on in the area so the hearing impaired pupils can see faces clearly when the teacher or narrator makes comments.
7. Remember, hearing children can tell how loud their own voices are, and how expressive; hearing impaired pupils cannot. You and the other pupils can find out from the special teacher how to reinforce good expression and how to help maintain appropriate voice volume with hearing impaired pupils.
8. Talk in full sentences. If not understood, say the whole sentence again or rephrase the same thing in a new sentence. Avoid single words. It is easier to grasp content or meaning in context.
9. Use your own natural, normal teaching voice.
10. Remind hearing pupils to speak in complete sentences, to enunciate clearly, and to first turn in the direction of the hearing impaired pupils.
11. Make sure the hearing handicapped pupils learn any special "in" words or expressions used in the class or neighborhood. Making and maintaining a dictionary of such terms can be a class project of general value.
12. Light can be a problem in lipreading. The speaker's face should be clearly visible. Also, it is difficult to lipread when there is a strong light behind the speaker (window, sun, lamp).

Techniques of Teaching

1. Make use of captioned films. The sound is supplemented by printed material on the film. The special education teacher can help get these.

Regular class pupils can profit from the combination of sound and print, too.

2. Use supplementary pictures and diagrams. As in the case of captioned films, the special teacher can help get pictures, diagrams, and other instructional materials that are developed especially for teaching hearing impaired pupils. These same materials can often help the hearing pupils, too.
3. Write (or print) key words, expressions, or phrases on the chalkboard or use an overhead projector.
4. In learning to read, hearing impaired pupils are seldom helped by phonic word analysis as much as they are by instruction that emphasizes visual clues.
5. Hearing impaired students cannot take notes while they watch the faces of their teacher and fellow students. One way to help is to give all students copies of the teacher's notes. Another way is to arrange for two hearing students to make carbon copies of their notes for the hearing impaired classmate. (Two students' notes work better than one; less will be missed.) Another essential thing for the teacher to do to help is to share the key ideas of the lesson with the special teacher of the hearing handicapped so the ideas can be used in the preteaching and postteaching sessions. It is helpful, also, to use a buddy system in which regular class students take turns reviewing their notes orally with the hearing handicapped student in planned study sessions. That, of course, can help the hearing buddies, too.
6. When making assignments, write them on the board or have them duplicated for distribution to all pupils.
7. Outlined lesson steps on the chalkboard or in duplicated form can be useful.
8. Check regularly on the match between the pupil's rate and level of cognitive development and the educational tasks now offered, plus those sequenced ahead for that pupil.

Team work among all concerned is the key to success.

Class and Pupil Management

1. Hearing impaired pupils welcome help in learning how to be quiet and not disturb hearing pupils by unknowingly making noises.
2. Expect hearing impaired pupils to accept the same responsibilities for considerate behavior, homework, and dependability as is required of others.
3. Call the child's name when asking for attention. Touching or tapping the arm or shoulder should not be necessary, any more than with other pupils.
4. Everyone may profit from time to time from being reminded that hearing impaired children have acquired an almost incredible skill. They "see" what others hear, and when they speak they do so without hearing the sounds of their own voices.

Expectations are similar for all pupils.

In emergency situations (e.g., fires, auto accidents) sign language interpreters may not be on hand. Service personnel such as custodians, police, and emergency squads need to know key signs to exchange vital information. Two tools to help prepare public safety and health personnel for emergencies are:

100 Medical Survival Signs: *available from Sign Language Store, 8613 Yolanda Avenue, P.O. 4440, Northbridge CA 91328.*

Silent Siren: *available from the National Association for the Deaf, 814 Thayer Avenue, Silver Spring MD 20910.*

5. Some pupils, including hearing impaired pupils, have learned to look attentive and to appear to be understanding when they are not. Occasionally direct a question to each of the hearing impaired pupils to assess whether they are really tuned in on what is being taught.
6. Your attitude is quickly caught by your pupils; they will tend to adopt your way of behaving and feeling about hearing impaired pupils.
7. Be as consistent as you can about daily routines and requirements, particularly when a new hearing handicapped pupil is entering your group. That will limit communication problems, especially while the process of getting acquainted takes place.
8. Give each hearing impaired child encouragement and help in making child to child contacts that can lead to friendships in the regular class.
9. Detail for each hearing impaired child what is expected in emergencies such as fire, accident, or other unusual occurrences. It is especially important that the child know what the regular class teacher expects under such circumstances.

Good discipline is a product of sound instructional management.

Certain points are of special significance. Hearing impaired pupils need to be where they can see what is going on and what the teacher is saying without strain (Ling, 1981). Also, it is important to get to know hearing impaired pupils under ordinary, non-stress conditions. That will help when conflict or discipline situations arise.

Summary

Hearing impaired pupils can take part in all aspects of regular education. Usually only minor adaptations are needed for them. Sometimes those adaptations turn out to be beneficial for all. An example is the football huddle, used originally by deaf players so opponents would not see their manual talk while setting up the next play.

As in the case of communication in the huddle, the great bulk of curricular adjustments, special teaching methods or materials, and other accommodations relate to some aspect of the language arts. Given the staff and facilities, those accommodations can be made for hearing impaired pupils from the very beginning of school.

What Every School with Hearing Impaired Pupils Should Have

This checklist can help principals and teachers determine how prepared they are to supply appropriate education for hearing impaired pupils. It can be used whether the hearing impaired pupils have been part of the student body from kindergarten on or whether they are transfers from special schools or classes. The quantity and arrangement of the required provisions will, of course, vary with the number and nature of the students enrolled.

Use the checklist to assess readiness.

Personnel

☐ Teacher-consultant qualified to instruct hearing impaired pupils.
☐ Regular administration and faculty oriented to work with hearing impaired pupils.
☐ Pupil personnel staff (counselor, nurse, social worker, psychologist) capable of working with hearing impaired pupils and with access to specialist consultation as needed.
☐ Service staff of school (secretarial, custodial, food services) acquainted with special considerations for hearing impaired pupils.
☐ Translators (interpreters) to assist in communication as needed.
☐ Volunteers and aides trained to work with hearing impaired pupils.

Pupils

☐ Student body oriented to hearing impaired pupils.
☐ Hearing pupils to participate in "buddy system" for sharing notes and related activities with hearing impaired pupils.
☐ Pupil-specific materials needed for day to day work (e.g., note duplicating booklets, hearing aid batteries, auditory trainer).
☐ Ready access to class-inclusion instructional materials such as captioned films.

Facilities and Arrangements

☐ TTY telephone and/or T-switch telephone hearing aid connections.
☐ Visual, tactual, or other substitute for voice or other audio signals where they are needed (i.e., public address system, whistle in gymnasium).
☐ Emergency local resource persons and materials (e.g., first aid, alarm) and their locations, if needed by hearing impaired student, by teacher, or by support staff.
☐ Visual alarm system and procedures for fire and evacuation.

Continuing Education

☐ Annual inservice update for faculty and support staff on developments in special education.
☐ Special orientation on call for new or substitute faculty and support staff.

Prospects for the Future

A steady demand exists for qualified teachers of hearing impaired children and youth. Regular class teachers who understand and can work with mainstream programs for hearing impaired pupils can also expect to be favored for employment in forward looking school systems.

Early childhood preparation is a growth frontier.

The rapid growth of interest in the very early childhood years suggests that there may be a sharp acceleration of demand for teachers for that population. McConnell (1973) stated:

> The goal in the parent-infant program is to develop a program of instruction for young hearing impaired children and their parents, to be carried out in a home environment, allowing for incorporation of language and auditory training into the more normal routine of home activities. (p. 291)

He went on to point out that:

> The success of the program for children under three which stresses early use of audition in acquisition of language is dependent not only upon highly skilled and competent teacher-counselors, but also upon close coordination between the teacher and the specialist. (pp. 391–393)

This kind of program, which begins with babies before 6 months of age, suggests that there will be a need for teachers who combine knowledge of very early child development with the competencies to teach deaf children.

At all points in the regular schools, including vocational education, it appears that there will be need for teachers who specialize in the education of the hearing impaired plus others who, while not specialists, are knowledgeable about accommodating to such pupils while carrying on regular grade instruction.

Serving multiple needs calls for broad skills.

Educators have only lately recognized the increasing numbers of hearing impaired youngsters with other complicating conditions. Pawelski and Groveman (1979) called for adaptability and a broadened perspective on curriculum and teaching. They added:

> Not only did instructional materials have to be looked at in terms of independent living skills and prevocational training, but teachers' time had to be negotiated to include such things as helping a student meet a 7:30 train. (p. 26)

A national consortium now provides inservice preparation to instruct multiply handicapped adolescent hearing impaired students. Known as Community Oriented Teacher Training for Adolescents, it offers a one-week training session dealing with counseling, curriculum development, job and community analysis, and other topics in a process-based problem solving setting. This will undoubtedly grow into a major new employment area requiring more comprehensive professional preparation.

Possibly the most rapidly expanding market will be for teachers who have several certifications. Teachers with elementary or secondary credentials plus qualification to teach hearing impaired pupils are in demand. For those who also add certification to teach other exceptional children, the opportunities can be even greater.

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CHAPTER 12 Visual Impairments

Chapter Outline

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  - Health and Social Welfare Considerations
  - Support Services
  - Educational Classification
  - Mainstreaming

- Technology and Special Procedures

- The Person Who Is Visually Impaired

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- Characteristics of a Comprehensive Educational Program

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The Challenge to Educators

Mainstream education has a long successful history.

Imaginative principals, teachers, and parents demonstrated more than 50 years ago that by working together they could provide the specialized education needed by most students with vision impairments totally within the regular class or with occasional removal for limited periods and purposes. The move to enroll and maintain these children in regular classes with special supports has spread widely. It is increasingly common for all teachers and principals to know and serve children with significant visual impairments.

Geerat J. Vermeij's first person account (Vermeij, 1978) tells how his education as a blind child was integrated and how he now feels about it. In the process he introduces a number of ideas that will be dealt with in depth later in this chapter.

A blind teacher speaks out on teaching the blind student.

☐I believe that three qualities should characterize the accommodation of the handicapped in public education: common sense, flexibility, and equal treatment. I am convinced that a change in attitude can accomplish much toward successful accommodation, and with a minimum of expense in time, money, and effort.

Everyone's perception of a problem is influenced by experience. I am a totally blind scientist. I teach and conduct research at the undergraduate and graduate levels in the zoology department of a large public Eastern university.

My research consists of field and museum work on the ecology, evolution, geometry, and adaptations of snails and other shelled animals of the world's oceans. My comments about education of the handicapped are the opinions of one who was motivated to work hard in school.

Most scientists begin their careers early, and I was no exception. My parents encouraged my first interests in natural history. So did a number of enlightened teachers at residential schools for the blind in the Netherlands, where I was born, and later in public schools in New Jersey. At the age of 10, I began to collect shells, and I rapidly became interested in other branches of biology as well. Thereafter, I pursued my scientific interests outside the classroom. My parents and brother constantly read to me. For two years, I attended Columbia University's Science Honors Program for high school students.

My experience has convinced me that education has two basic functions. First, it conveys knowledge and skills that enable us to deal with life, pay our taxes, and hold a job. This function encompasses specific training not only in reading and writing and calculating, but also in thinking, analyzing, asking questions, and applying knowledge.

Second, education instills values that permit us to live and function in the society in which we grow up. This is the function of integration.

Many people have believed that for the blind and for other handicapped individuals, the two functions of education are incompatible. Educators who run residential schools often maintain that blind students cannot learn essentials like braille and independent travel adequately unless they are segregated in special schools or classrooms. On the other hand, residential schools prevent blind students from being integrated into the society at large until they go to college or get jobs.

Public education, however, is a ready vehicle for social integration. Moreover, public schools can teach special skills to the blind: Training in Braille, typing, mobility, and other techniques essential to the functioning of a blind individual can supplement the standard curriculum or replace parts of it.

The regular classroom can offer needed services.

My experiences in the public schools of New Jersey prove that training and integration can coexist in the standard classroom. When I arrived in the United States in 1955, I was enrolled in third grade. Once or twice a week an excellent resource teacher from the New Jersey State Commission for the Blind came to teach me English grammar, contracted English Braille, Braille typewriting, and standard typing. Throughout my public education, the Commission provided textbooks that had been brailled by volunteers. From eighth grade on, a reader paid by the state came daily to read other books for leisure, and a Commission instructor gave me mobility training.

Already, the residential schools in the Netherlands had trained me thoroughly in Braille. One of these schools also had a small collection of stuffed animals. These specimens fascinated me and helped sustain my interest in natural history. The school frequently took me and my classmates on excursions to the woods, heaths, beaches, airports, and other places, where all of us were at liberty to experience firsthand the world around us.

These elements of education must be incorporated into the curriculum of both blind and sighted students. The first years of schooling of the blind must include a thorough training in reading, writing, mobility, and exploration.

Not all exploration can be done firsthand, of course. Thus it is essential to acquaint blind students, like sighted students, with the world around them by means of illustrations, other sensory aids, and books.

Flexible use of aids enhances instruction.

What about visual aids? The term *visual aid* is a bit of jargon that is unusual because it conveys an accurate meaning. A visual aid is an aid to teaching, not a substitute for it. I have listened to lectures in which the speaker relied heavily on slides and other visual aids. A good lecturer, however, makes points both orally and visually, so the point of the lecture gets across no matter how many visual aids go along with it. When teachers or lecturers write words on the blackboard, it is easy for them to say or spell the words out. This is an example of the quality of flexibility.

The science laboratory can provide another example of flexibility. There are certain procedures and types of experiments that a blind person cannot do in the laboratory with present-day technology. Inability to do some of the laboratory work does not, however, excuse a blind student from doing calculations or from experiencing the techniques secondhand through classmates' descriptions.

Moreover, a blind student can easily use many laboratory techniques [and perform] some dissections and examination of plants and animals, many experiments in mechanics and electricity, [and] measurements of length and angles. In addition, the department can buy models designed to acquaint the student with phenomena or things that cannot be experienced firsthand. After all, many theoretical chemists rely heavily on models of molecular structure to aid them in thinking about complex structural problems. From the viewpoint of the blind student, it is much better to take a course in which some of the laboratory work cannot be done firsthand than to be denied the opportunity to take the course at all.

This does not mean that the criteria used in evaluating a blind student should be different from those for a sighted student. It is unfair either to relax criteria for the blind or to invent additional ones. Thus, we should not permit a student to complete a course without some understanding of techniques—nor should we demand medical information or psychological tests if these are not required of other students also. The blind and other handicapped people desire equal, not preferential or different treatment. To compete with the sighted on uneven terms severely weakens the position of the blind and impairs their chances of changing people's attitudes and of achieving integration.

Equal rather than preferential treatment is desired.

Lastly, I wish to emphasize that many problems which the handicapped face are those of the human population as a whole. Neither the blind nor the sighted will learn science or any other subject unless they are motivated, and unless teachers portray their subjects as fun, exciting, powerful, and intellectually satisfying. Those teachers who discourage the blind from taking a particular course or pursuing a field probably discourage nonhandicapped students as well. A flexible, tolerant attitude that encourages experimentation and a little risk helps lower educational barriers for blind and sighted alike.

In summary, I believe that attitudes create the greatest impediments to integrating the blind and other handicapped people in education. Common sense, flexibility, and a commitment to treat the handicapped on equal terms with others can lower and perhaps ultimately remove these barriers. (pp. 77–78) □

The Vermeij story vividly illustrates both the complexity and the personal rewards of special education for a visually impaired child. The challenge is to help all such children.

Health and Social Welfare Considerations

Vision defects occur in about 20% of the general population, but the majority are corrected with prescriptive lenses. Educationally significant, noncorrectable vision impairments are found in only about 1 student in 1,000. Only about 3 out of 10 of those children are blind for educational purposes. We shall see what educational considerations are important for them after reviewing some background that can help in understanding vision impairments, in preventing them, and in obtaining health care for those that exist.

Blindness is a low incidence condition.

The definition of blindness most widely used in this country is not medical or educational, but is legal or economic. It was written into the Social Security Act of 1935, primarily for the benefit of aged persons; since then, however, it has become the basis for a broad range of categorical programs.

> Blindness is . . . visual acuity for distant vision of 20/200 or less in the better eye, with best correction; or visual acuity of more than 20/200 if the widest diameter of field of vision subtends an angle no greater than 20 degrees. (National Society for the Prevention of Blindness, 1966, p. 10)

One can be legally blind and still have useful vision.

Note that this definition is one that identifies categories or classes of persons for certain legal purposes. The legal definition of blindness includes not only persons who are totally blind, that is, unable to distinguish light from dark, or with no light perception, but also those who have some vision—severely impaired though it may be—in one or both eyes. By definition, then, the legal term *blindness* is not synonymous with total absence of sight.

To establish the eligibility of individuals to participate in federal-state aid-to-the-blind programs, most states adopted the Social Security Act definition. It is also accepted by most other agencies, official or private, that provide aid or services to blind persons. These include eligibility for income tax exemption, talking books from the Library of Congress, special teaching materials (braille and large print) from the American Printing House for the Blind, and state service programs.

The term *partially sighted* includes a larger group whose vision in the best eye after correction is between 20/70 and 20/200. The person with 20/70 vision sees at 20 feet what a person with 20/20 (normal) vision sees at 70 feet. The person with 20/200 vision sees at 20 feet what one with 20/20 vision sees at 200 feet. Anyone with 20/400 vision or worse cannot read letters of any size at 20 feet, even the Big E on the Snellen Chart. Such a person may, though, be able to function as a sighted person educationally by reading pages of normal type at the usual distance, or closer, with the aid of special lenses.

Medical classifications differ in focus from those of other disciplines.

Physicians are usually concerned about classification of visual impairments according to cause (etiology), prognosis, and possible treatment. Thus, medical classifications differ somewhat from those whose focus is legal rights, social services, education, or financial considerations.

Visual impairments occur increasingly coincident with other impairments. Fully half of blind or partially seeing children can be described as multiply impaired. One probable explanation is the medical advances that make it possible to keep alive newborns who have suffered adverse prenatal or perinatal influence. Diseases are another important cause. Rubella (German measles), for example, leaves in its wake large numbers of multiply impaired children, especially when it occurs in women during the first trimester of pregnancy. The last epidemic of rubella in the United States, 1964 to 1966, is

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20/20 to Become 4/4

One of the most common phrases connected with eyesight, "20/20 vision," is about to fall victim to metric conversion. The National Academy of Sciences' National Research Council Committee on Vision is expected to recommend that the eye chart test fall in line with the metric system, changing the standard for perfect sight to 4/4. The American Optometric Association supports the change, stating that it will simplify the prescribing of glasses for tasks requiring good vision at great distances, and will reduce the space needed in a doctor's office to perform the test from 20 feet to 4 meters, or about 13 feet. It is said that the eye chart test is the only vision test in the United States that has traditionally been nonmetric.

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estimated to have produced 30,000 children with visual and other concomitant impairments. Modern, effective immunizations, promoted by good health education, can reduce that number to near zero if available knowledge is properly applied.

Parent observation in the preschool years is important.

Most children with severe visual impairments can be identified at birth or in infancy. However, not all are detected. Careful observation by parents and examination by physicians are essential in the early preschool years of life, but teachers and principals can join in watching for such characteristics as the following (Calovini, n.d.):

Appearance
Red rimmed eyelids
Swollen eyelids
Crust near lashes
Frequent sties
Red or watery eyes
Eyes in constant motion
Crossed eyes or one eye turning in and the other eye out
Eyes that cross when the child is tired
Eyes with pupils of different sizes

Teachers can note eye problems by observing how children behave.

Behavior
Blinks constantly
Rubs eyes often
Tends to have eyes crossed when reading
Tries to brush away blur
Seems overly sensitive to light
Stumbles or trips over objects
Holds book too close or too far away when reading
Frequently changes distance of book from near to far as he reads
Shuts or covers one eye when reading
Tilts head to one side when reading
Screws up face when reading
Frowns when trying to see distant objects
Thrusts head forward in order to see an object
Holds body tense when trying to distinguish distant objects
Becomes inattentive during reading lesson
Reads only brief periods without stopping
Shows reversal tendencies in reading
Tries to guess words from quick recognition of a part of a word in easy reading material
Tends to lose the place on the page
Confuses *o* and *a*; *e* and *c*; *n* and *m*; *h*, *n*, and *r*; *f* and *t*
Reads less well the longer he tries
Wants to play when he should read
Has short attention span when doing chalkboard, bulletin board, or map work

Shows lack of interest during field trip discussion
Has poor alignment in writing
Cries frequently
Becomes irritable over work
Has frequent temper tantrums

Consistency of behaviors is a key consideration.

Any child may show these behaviors at different times for different reasons. But when some are present day after day under the same circumstances, whoever notices them should refer the child for an eye examination. By age 4 or 5, standard screening devices such as adapted Snellen Charts or telebinocular instruments can be used to screen for vision problems. These procedures produce high rates of false positives but miss few real problems.

By the time a child's vision is checked in school, it may be too late to correct some defects. A home test parents can use is designed as a "pointing game" for children too young to read standard eye charts.[1] The letter E appears, pointing in four different directions. The child is asked to point which way the E is going. If there is trouble seeing the smaller rows of E's or if one eye performs better than the other, it is a signal to have a professional examination.

Support Services

People with vision impairments, particularly those who are legally blind, have been the object of many excellent support services. A distinction insisted on by some blind persons is between programs *for* and *of* the blind, as in the case of the prestigious American Foundation *for* the Blind, which draws interest and resources from anyone who wishes to join in efforts for improving opportunities for the blind, and the American Council *of* the Blind, an important leadership agency and advocacy group consisting of blind persons.

Vigorous and broad-based advocacy characterizes this group from birth through adulthood.

Associations like these are effective in securing better schooling for children, services for parents, opportunities for both sheltered and competitive employment, public transportation, recreation, legal services and protection, housing, and health services. Association leaders typically give much attention to public education, to improving the general public understanding of vision impairments, and to advocating for their members before legislatures and other policy making and administrative bodies.

As school services for visually impaired children have grown dramatically during recent decades, so have volunteer services. Teachers of children with visual impairments frequently will have contact with organizations of parents and friends of visually handicapped children who monitor carefully the extent and quality of schooling and other services provided.

The National Association for Parents of Visually Impaired is a nonprofit organization for parents who are committed to providing support to the parents and families of children and youth who have visual impairments. In addition to providing workshops and establishing a national clearinghouse, NAPVI attempts to promote public understanding of the needs and rights of children with visual impairments.

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[1] The test is free from the National Society for the Prevention of Blindness, 79 Madison Ave., New York, NY 10016.

Many volunteer organizations began because of the needs of teachers who found themselves with visually impaired children and no instructional materials. Each state has numerous small groups of transcribers and transcriptionists who record materials for schools. They also work for visually impaired adults in college or university courses or in professions and businesses. A number are affiliated with national agencies like the Library of Congress, the American Printing House for the Blind, the National Braille Association, and National Recording for the Blind. A most gratifying experience for professional workers is to observe the highly motivated work of literally thousands of transcribers and other volunteers who devote time and energy to the production of instructional material for visually impaired children and adults.

Volunteer workers produce many instructional materials.

Social workers, employed in schools or through specialized networks of state and local offices, help to locate and register children with significant vision impairments at the earliest possible ages. They then direct parents to needed services, such as medical help, parent training, and preparation for schooling. Children of families who receive strong and effective services in the early years have a considerably better chance of profiting from schooling later.

Educational Classification

For educational purposes, children are considered to be blind when they must be taught to read by using braille, the Optacon, or other means that do not involve sight. Partially sighted students, for educational purposes, have vision problems that require some special adjustments in instruction but, nevertheless, can be taught to read print of regular or large size. These educational classifications are functional; they are determined by the pupil's preferred mode of reading.

Deciding whether a child is educationally blind or partially sighted, in the sense of requiring a special mode of reading, is by no means simple. Some children with visual acuity measuring 20/400 may need braille, while others with the same measured acuity will be able to read clear print quite adequately.

Whether a particular child is taught to read print or braille depends on many factors other than visual acuity. Some of these are intellectual ability, motivation, family support, judgments of expert professionals on the use of low vision aids (e.g., magnification devices), presence of secondary handicaps, preferences of the child and other significant persons, and prognosis for improvement or deterioration of vision. Only three of the decision variables listed are characteristics of the child. Others are characteristics of the total life situation.

Most of the important educational variables are external to the child.

Finally, the decision on whether a child needs accommodations for visual impairment in an instructional program must be validated by actual trials within the school situation. Even then, the child's needs will not be static, so programs will require changes with time and experience.

Mainstreaming

All levels and varieties of service delivery have value and should be available as needed, but *most visually handicapped children do well in the mainstream.* At the primary level a child enrolled in a regular class may need extensive help from a resource teacher who can provide intensive instruction in orientation and mobility, typing, or braille. Later on, the student may need only occasional itinerant special teacher help to develop and maintain compensatory skills. For brief occasional periods the same student may need to go to a residential school for intensive instruction in daily living skills and for experience with other blind persons with whom models for learning and adjustment can be shared.

Visually handicapped children are among those most readily educated in the instructional mainstream.

However, the place where education is provided is far less important than the nature of the instruction and its quality. All of the specialized instruction formerly offered to visually impaired students only in specialized environments can be brought from isolated centers into the regular school environment. Teachers of children with vision impairments were among the earliest to demonstrate that the necessary specialized skills can be taught in regular classes by cooperative arrangements, and that the children can be maintained in regular classes all or most of the time, while receiving appropriate, high quality schooling.

In many states in the 1950's and 1960's blind and partially sighted students were almost automatically referred to and placed in residential schools. Since then, however, a countertrend has grown, bringing orientation and mobility training, instruction in braille reading and writing, and other special subjects into the resource rooms and regular classes of community schools. Thus, the downward movement on the cascade of specialized instruction is exemplified to a high degree in programming for visually handicapped children. The prevailing practice in a great many school districts is to start visually impaired children in regular school programs from the beginning and to maintain them there by delivering the special instruction they need in that environment. That, of course, has required increasing involvement of regular teachers and principals in cooperative programming with special teachers.

Consider the following two illustrations. The first is concerned with arranging education for a partially sighted child whose vision is in a period of change; the second involves a child who has some vision but who will need braille instruction.

Special and regular teachers join forces in planning.

□ Judy was 8 years old and in the third grade. Her teacher asked the consulting vision teacher for help because Judy did not seem to see as well this year as last and was beginning to drop back in her school work. After their cooperative assessment and discussion the two teachers wrote this report:

Though she tried hard, Judy had great difficulty in performing visual tasks, whether at reading distance or farther away. Glare bothered her; she was able to see better when the material was held up at an angle. She said that both the print in her regular reader and large type print were easy to see. However, she read poorly in both and appeared to have less difficulty in seeing the large type. The general quality of Judy's school work and her speaking vocabulary indicate above average ability. The parents report that Judy will receive a new prescription soon. Also, she is to have surgery on one eye in a few months.

We hope the new prescription and anticipated surgery will help to solve Judy's problems in seeing. Educationally, however, she can benefit now from the use of a reading stand, a marker, dark lined paper, and at least some of her books in large type. The dilemma of dittos can be solved at the present time by the teacher continuing to darken them or by using a yellow acetate transparent overlay to darken the purple print.

Medical interventions can have educational benefits.

Judy's difficulty in reading may be caused by the combined effects of limited seeing and lack of experience in reading. The large type should add encouragement for her to read. Even though it is difficult, she should continue to use her eyes to read and write.

Judy's ability to see will vary from day to day. If she can see well enough and prefers to use regular typesize materials at times, she should be encouraged to do so. ☐

☐ Debbie, age 5, attended a day care center 7 hours a day while her parents worked. Following is part of a report prepared by the day care center teacher and a public school special vision teacher as Debbie entered kindergarten.

At the center each day, time was given to free play with toys indoors and out, walks to the parks and nearby playgrounds, small group activities, and nap time. The director set the pattern of treating Debbie normally. That carried over to the teachers and other children. She has not been pampered or given special privileges.

Debbie is very talkative, uses language well, and appears very capable of learning. She has excellent orientation and mobility skills considering that she apparently has "light perception only" vision.

The behavioral objectives worked on at the center included further language development; object identification, discrimination, and classification; self care; math readiness; sensory listening and smell; and large muscle coordination including running, skipping, jumping, and galloping. In addition, specific skills used in kindergarten such as cutting, pasting, folding, and coloring were taught.

Concerns at the center about Debbie are her habit of very frequently rubbing her eyes (even when walking)[2] and a tendency to frequent illnesses. She has taken a long nap each day at the center.

Recommendations and future plans. First, Debbie will be receiving day care in her neighborhood even after she enters kindergarten. She will be taking the same school bus as the neighborhood children. Second, a vision teacher plans

The educational plan is based on individual needs and conditions.

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[2] A habit like this is sometimes called a blindism. The intermittent pressure from rubbing the eye can produce interesting sensations of flashing lights.

to be in her school two times per week next year for direct tutoring, preparation of special materials, and interpretation of needs with the teacher, as needed.

One year later Debbie's kindergarten teacher and the consulting vision teacher made the following report:

> The behavioral objectives planned for Debbie this year for the special tutorial sessions included: braille readiness, orientation and mobility, handwriting, self-care skills, and classroom maintenance needs.
>
> Debbie completed through Book 14-E in the Lippincott reading readiness series. Portions from each book were selected, brailled, and read. She was also part of a reading group that emphasized listening skills. Many reading readiness games for the class were adapted in braille. She has been able to successfully match, recognize, and recall all of the upper and lower case braille letters and has mastered beginning sounds. She has effectively blended sounds for beginning reading as a part of this series.
>
> Many of the math readiness games from the "Work Jobs" book that were in the kindergarten room were readily adapted in braille.The daily calendar program was also prepared in braille, as were experience stories.
>
> Debbie moves freely within her classroom, to other nearby rooms, and in the physical education program. She is unafraid and has a keen awareness of herself in space. Self care assistance has been minimal, with shoe tying receiving the greatest emphasis. She generally is responsible for her own in-class needs.
>
> Manuscript writing of her first name was a goal recently attained through use of tactile aids. Nearly all the craft projects planned by the kindergarten teacher required no special adaptations to be meaningful.
>
> Debbie's mother attended the meetings planned for parents and applied for Talking Book and braille book services from the regional lending library.
>
> A concern in preschool was frequent illness and tiredness. There was little of that this year.
>
> *Recommendations and future plans.*
>
> 1. Debbie had considerable success in kindergarten. It seems likely that will continue in grade 1. She will need some aid from a vision teacher on a daily basis for direct tutoring and to prepare materials and confer with her regular class teacher.
> 2. A successful method to erase the eye rubbing has not been found. Debbie is aware of it and is able to talk about it, which may be a start.
> 3. She shows a healthy attitude about her impairment but, as would be the case with many other blind children, she needs assistance in interpretation of social situations and awareness of her own social impact. ☐

Steady progress resulted from detailed teacher planning.

Plans for the following year built on previous gains.

Judy and Debbie are fairly typical of young mainstreamed visually impaired pupils. The special equipment and procedures they and others find useful are described in more detail in the next section.

Technology and Special Procedures

Louis Braille (1809–1852) was blinded at the age of 3 and became first a pupil and then an instructor at the Institute des Jeunes Aveneugles in Paris. There he developed the system of embossed writing that bears his name. Essentially, *braille* is a code based on a cell of three embossed dots in each of two vertical rows. By varying the placement and number of dots in each row, braille provides all the letters of the alphabet and the numbers 1 through 10 (the letters *a* through *j*). Variations of placement and added cells permit the notation of all punctuation signs and the end of communications. Braille is read by passing finger tips across the braille figure in left to right order, as in sight reading.

Reading can be done by touch.

In use today, braille has two forms: full spelling (English Braille Grade 1) and contracted braille; the latter consists of the first form plus 189 contractions and short-form words and is known as English Braille. The alphabet and numbers 1 through 10 are illustrated in Figure 12–1.

The *Optacon* is an instrument that scans print materials electronically and raises the orthographic features. Literally, the print is raised and, hence, can

FIGURE 12–1
The Braille Alphabet and Numbers

a	b	c	d	e	f	g	h	i
O•	O•	OO	OO	O•	OO	OO	O•	•O
••	O•	••	•O	•O	O•	OO	OO	O•
••	••	••	••	••	••	••	••	••

j	k	l	m	n	o	p	q	r
•O	O•	O•	OO	OO	O•	OO	OO	O•
OO	••	O•	••	•O	•O	O•	OO	OO
••	O•	O•	O•	O•	O•	O•	O•	O•

s	t	u	v	w	x	y	z
•O	•O	O•	O•	•O	OO	OO	O•
O•	OO	••	O•	OO	••	•O	•O
O•	O•	OO	OO	•O	OO	OO	OO

1	2	3	4	5	6	7	8
•O O•	•O O•	•O OO	•O OO	•O O•	•O OO	•O OO	•O O•
•O ••	•O O•	•O ••	•O •O	•O •O	•O O•	•O OO	•O OO
OO ••	OO ••	OO ••	OO ••	OO ••	OO ••	OO ••	OO ••

9	0
•O •O	•O •O
•O O•	•O OO
OO ••	OO ••

be distinguished and "read" by feel. Its use is on the increase. However, braille remains the most common form of reading by educationally blind students.

Because braille mathematics calculations are long and slow, the *abacus* is used instead. It speeds the processes. Sighted children also enjoy using the abacus.

The *braille writer,* somewhat smaller than a typewriter, produces braille print mechanically. It has a spacing bar and six keys. They correspond to the six dots of the braille cell; the keys can be pressed simultaneously in any combination to produce the desired cell constellation. Commonly used by blind persons early in elementary schools, it remains a continuing aid throughout school and life.

Slate and stylus are equivalent for blind pupils to tablet and pencil for sighted persons. The equipment consists of a lap board, special braille paper, and a slate (a template with spaces corresponding to dots and cells of braille). The student uses a hand stylus to punch the dots in each cell. A slower procedure than the braille writer, the slate and stylus work well for spelling tests, short answer assignments, and for recording assignments.

A variety of materials and equipment aid learning.

The *Kurzweil Reading Machine* (KRM) provides direct access to printed and typed information. Compact size, push-button control, readily understood speech, automatic tracking of text, and the ability to read at speeds faster than human speech are among its features. Blind college students read reserve materials from off the library shelves. Visually handicapped secondary and elementary school students use the KRM to keep up with reading assignments in mainstream classes.

Material is placed face down on the scanner's glass surface. A control panel activated by the user causes the machine to automatically locate the first line of text and begin scanning the page. Within a few seconds an electronic voice is heard reading. Controls permit users to make choices about the manner and speed in which the material is read. The machine can repeat the previous few lines or words, spell out words which may be obscure, announce punctuation and capitalization, and mark certain words or phrases for later reference.

As an advanced talking calculator, a change of program tape enables it to perform and announce ordinary computations and complex logarithmic, trigonometric, and exponential functions.

The Talking Magazine edition makes *U.S. News & World Report* available to some 22,000 blind and physically handicapped people at no cost to themselves. Every Saturday while the presses turn out the latest issue of the magazine, four professional broadcasters read nearly every word of it onto tapes, alternating their voices with each article for variety.

Then the tapes are transcribed on four master records, which usually run about 4 hours. These are used to press out two 9-inch flexible discs. Each of the four sides is embossed with braille lettering for easy identification. Thousands of the discs are mailed, arriving at a listener's home just a few days behind the regular delivery date. To hear the tapes, the blind subscriber uses a special 8⅓-rpm record player, available on loan.

FIGURE 12–2
Examples of Print Size*

Point Size:		**Examples:**
6	zyxwtvutsrqponmlkjihgfedcbazyxwv	many maps and directories
8	zyxwtvutsrqponmlkjihgfed	newspapers
9	zyxwtvutsrqponmlkjihgf	magazines
10	zyxwtvutsrqponmlkji	high school texts
12	zyxwtvutsrqponml	books, children 9–12 years
14	zyxwtvutsrqpon	books, children 8–9 years
18	zyxwtvutsrq	books, children 5–8 years, and large print texts
24	zyxwvuts	large print books

*Print size is in "points," measured from the bottom of the lowest to the top of the highest character. One point equals 1/72 of an inch.

The National Library Services for the Blind and Physically Handicapped, a division of the Library of Congress, maintains the list of people who ask to receive the talking edition and provides the record players. It also foots the bill for the records—which are provided at cost by the magazine.[3]

Large print books help children with partial sight.

Large print books are used with children whose partial sight interferes with reading ordinary print, but who can discriminate larger letters and words. Large print generally refers to letters which are 14 or more points high (see Figure 12–2). The research of Birch et al. (1966) and others indicated that most large print books are in 18 point type. Large print can be produced by photo enlarging standard type, by resetting standard type in large sizes, by using a large-type typewriter, and by writing by hand in manuscript. There are several related ways to make reading easier for the visually impaired, such as using magnifiers (allowing many students to read standard print); reading with the print close to the eyes (this will *not* hurt the eyes, although it may cause some fatigue); and selectively using large print for some tasks (such as dictionary work) and standard print for others.

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[3] Information on the Talking Magazine edition is available from Reader Service, 2300 N Street, N.W., Washington, D.C. 20037.

Actually, many more partially seeing pupils can learn to read ordinary print than was once believed (Barraga, 1976; Birch et al., 1966). They should be given opportunities to do so; it will not harm their eyes. Obviously, reading ordinary print has advantages. Large books are a considerable inconvenience. With experience in reading, dependence on large print usually lessens. If large print does prove necessary, it may not become apparent until third grade books are used, when type becomes smaller in texts and other materials.

Services and special materials are useful and free.

Reader services come in various forms. Volunteers frequently are needed simply to read aloud to students; they may be classmates (if they meet the criterion of age, they can be paid for their services by the state) or other members of the community who have organized themselves to provide systematic reader services. In other cases, readers put materials on tape recorders. The Library of Congress provides nationwide distribution of "Talking Books," recordings of outstanding books read aloud by well known figures. Visually impaired (and physically impaired) persons obtain the records from regional depositories. In some states, special recordings are made for occupational groups, such as blind lawyers. In at least one state, reader services are provided by radio, using the side channels of the public FM radio network. A special agency (Recording for the Blind, Inc.) provides recordings of materials for blind college students.

Visually impaired students may select from among a variety of materials and equipment shown in the checklist represented in Figure 12–3. Decisions regarding their selection and use should be made by the special and regular teacher after consultation and work with the individual student.

Special education teachers, supervisors, and coordinators are familiar with where and how to access these items. Many can be borrowed as needed. Such special materials and equipment for schooling are free to the child. They must be provided, if needed, as the child's right. Moreover, use is not necessarily limited to visually impaired pupils. Frequently children with learning disabilities or other conditions that interfere with or limit writing or reading, for example, can use some of these items to good advantage.

The Person Who Is Visually Impaired

The fairest and most accurate statement about persons with visual impairments is that they vary greatly. They are not of a kind; no common set of expectations can be made for them. They need and deserve to be known individually.

Geerat Vermeij grew up abroad and in the United States in a life of blindness, becoming a self-confident scientist. Judy and Debbie faced public school entry with vision impairments. Laurie, some of whose story follows,[4] had to

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[4] Excerpted from Brightman, A. J., & Greig, D. (Eds.). *Laurie.* New York: Scholastic Book Services, 1978. Reprinted by permission.

FIGURE 12–3
Materials/Equipment Checklist*

Partially Seeing Students	Blind Students
PAPER	
___ Regular notebook paper ___ Bold line paper ___ Raised line paper ___ Non-glare paper	___ Braille transcription paper ___ Graph paper ___ Raised line paper
BOOKS	

___ Regular print
___ Recorded books
    ___ Cassette
    ___ Reel
    ___ Discs/Records
___ Large print
	___ Braille books
	___ Recorded books
	    ___ Cassette
	    ___ Reel
	    ___ Discs/Records

EQUIPMENT	

___ Tape recorder
    ___ Cassette
    ___ Reel-to-Reel
___ Typerwriter (large or regular type)
___ Adjustable top desk; desk top easel or book stand
___ Magnification devices (low vision aids
___ Lamps
___ Closed circuit T.V. system (enlarges standard point)
	___ Tape recorder
	    ___ Cassette
	    ___ Reel-to-Reel
	___ Typewriter
	___ Braillewriter (6-key machine that "types" braille)
	___ Slate and stylus (for writing braille)
	___ Abacus
	___ Braille rulers
	___ Braille erasers
	___ Talking calculator (calculator with with audio output)
	___ Speech Compressor

OTHER	
___ Large print maps ___ Relief models ___ Raised line drawing kit ___ Black felt-tip pens ___ Large, soft lead pencils ___ Yellow acetate (place over purple dittos to increase contrast) ___ Writing guides (helps person write on line)	___ Braille labeler ___ Swail dot inverter (for making raised dot drawings) ___ Raised line drawing kit ___ Braille maps and globes ___ Relief models ___ Optacon (electronic device that enables blind person to read print) ___ Raised print and braille clocks ___ Writing guides (helps person write on lines)

*Adapted from a publication of the Ohio Resource Center for the Visually Handicapped, Julie Todd, Coordinator, 470 Glenmont, Columbus, OH 43214.

adapt to blindness from a life of seeing. Learning to know her may help illuminate the essential individuality of all of us, exceptional or not.

Laurie's feelings are like those of any new student.

☐This is my first year in high school, and I was really kind of scared when I started. I got butterflies in my stomach and sometimes felt like I didn't want to go at all. My high school is a big place, and I was worried about being able to find my way around. I was even worried about finding the front door! Besides, everyone already knew everyone else, and I didn't know anyone. I'm glad that didn't last too long. . . .

I don't always like to use my cane. Like, if I'm going to the store with one of my friends, it makes me feel funny to be carrying it around. It makes me feel awkward.

I guess some people think I'm stubborn because of this, but the way I figure it is, other people don't have to do it, so why should I? But then I realize that knowing how to get anywhere by myself makes learning how to use the cane worthwhile.

Braille is like an alphabet made up of a bunch of raised dots. So I read with my fingers instead of my eyes, even to tell what time it is. The hardest thing is learning what all the different shapes mean.

New learning presents challenges.

There are all different kinds of things for me to learn, like using a regular typewriter, writing my signature, cooking, doing laundry, making my bed, going shopping. You might not think so, but even learning how to make a grilled cheese sandwich can be a big deal for me.

I'm a pretty quiet person mostly. I guess you could say I'm kind of shy, or maybe I'm just old-fashioned. When I meet someone new—especially if that someone is a boy—my tongue gets tied up in a knot. . . .

Before I went totally blind, I used to think that if you couldn't see, you wouldn't be able to do anything on your own. All I could think about was a little man on a street corner holding a tin cup. I never thought of a blind person being able to go to school or take a bus or do almost anything.

I guess that's the way most people think about it.

My friends all understand that I don't really want to be treated differently, but I also want them to know that I do have a problem. There are some kids I know who would feel funny if I held onto their arm or asked them for help.

Friends can sense when help is appropriate.

But once in school I was walking down the hall with one of my friends, and she just naturally took my arm . . . just like that, I didn't say anything, and neither did she. It's like she knew that I might have trouble or something, so she naturally reached over. That's how I like it.

Then there are some people who have trouble doing that, and that's O.K., too. I think it's something that they can learn from experience.

You want to know what makes me really uncomfortable? Every once in a while there are these people who come up to me and don't say anything. They keep real quiet and just look at me. It's as if they're going to find the answers or something all over my face. It's embarrassing when that happens, because then other people start to wonder what the person is staring at and then they begin to stare, too.

I guess people stare because they just don't understand what being blind is all about. I guess they have questions that they don't know how to ask.

Another thing that really aggravates me is when people talk about me as if I weren't there. I can't even describe how angry that makes me. Like sometimes someone will ask my mother, "And how's Laurie?" . . . and, I mean, I'm standing right there. I'm not invisible.

She'll usually say, "Ask her."

Lori's one of my best friends, and a really nice person. She doesn't put people down because they're different. She's just easygoing and nice to everybody. We hope someday we'll live together when we go to college. We'll get an apartment, you know, and have a cat. It'll be nice.

Future plans point to independence.

When I grow up, I want to be either a kindergarten teacher or a child psychologist, because I just love little kids. I suppose being either is going to be hard for me, but that's all right. I don't like anything that's too easy. I like something that has a challenge.

I think that I'm going to make it, and that everything's going to be all right for me. I think I'll be able to do more and more things on my own. I won't always have to have somebody else around. I'll be independent. ☐

The Function of Vision in Learning

Children with vision impairments who are enrolled in regular school programs tend not to have complicating secondary conditions. Their major problem, to put it simply, is that they do not see well. Obviously though, reduced vision also limits concept formation from environmental experiences, limits mobility, makes spatial orientation difficult, and alters the acquisition of personal and social behaviors that are learned by seeing and imitation of other children and adults.

Vision facilitates coordination and integration of information.

Vision coordinates most of our sensory impressions of events and objects. True, children with little or no vision do use touch and hearing to become familiar with the sound, feel, and features of some objects and persons. But they cannot learn from feel alone about a bird in flight, a small insect, colors, or the moon and stars. The song of a bird alone tells nothing of its size or coloration; a person's voice tells little of appearance or behavior; running footsteps could indicate a person fleeing from something or jogging. Coordination with visual clues is missing.

We also use sight to relate the coordinated information received from our senses to the meaning of words, thus building concepts. Young sighted children, for example, quickly learn to distinguish between a truck and a passenger car, a fire engine and a police car or ambulance, and even between the makes of their family's and a neighbor's car. No one teaches those differences; sighted children develop them from the evidence of their senses and the words for the vehicles. Children without sight may learn to distinguish the sounds of the different vehicles, but they are unable to form *the same* concepts sighted children have of them.

Vision encourages learning by imitation.

A great deal of a child's learning derives from imitation. Blind children cannot see to imitate smiles, frowns, chewing motions, the placement of feet on stairs, the use of tableware, clapping hands, and the like. Children with very low or no vision usually must be taught such behaviors deliberately. Blind children, seldom aware of the possible range of facial expressions and their significance, do not know that they too are capable of expressing emotions facially.

Those who see little or nothing encounter a special set of problems in spoken communications because they lack the visual cues that help sighted persons interpret and respond to the spoken word. The movements of speech itself, as well as body and hand movements and facial expressions, often are as important as the message itself. An arched eyebrow may emphasize surprise, or a shrug of the shoulders may be the silent answer to a question.

Visually impaired persons can be taught techniques to minimize or overcome difficulties in speaking and responding to the spoken word. The aim is greater confidence in social conversations, family interactions, public gatherings, and in securing and refusing the help of sighted persons.

Some persons with very limited sight develop an expressionless, or "deadpan," look. On the other hand, some blind people, rather than lack expresion, take on a fixed smile. Both are inappropriate for every situation, and draw attention away from the actual message involved.

Also, such persons are not always sure of the exact location of those to whom they are speaking. As a result they may use a "broadcast" voice to compensate. A typical situation would be a large social gathering where the visually limited person is not aware of the size of a room, the number of people present, and where they are located. Messages are sometimes delivered in a very loud voice so that anyone, and everyone, in the vicinity can hear. The voice booms out in hopes that the intended receiver is present and listening. On the other hand, the blind person may speak too softly.

Training can help social adjustment.

Lack of eye contact is one of the most common and noticeable difficulties. Untrained partially seeing or blind speakers may hold their heads down and look everywhere except directly toward the persons to whom they are talking or who are talking to them. Through training, they can be taught to localize the sound of the voice, to face the speaker, and to point the nose in the direction from which the voice seems to be coming. In this way they achieve "eye contact" or a good approximation. Speaking training also covers introductions, voice analysis and control, spoken communication as used in public shopping and dining, and information about, and practice in, job interviews.

Knowledge gained in spoken communication should be applied in other areas of instruction. For example, sometimes a special course is offered on "techniques of daily living," which includes activities such as asking directions while on a mobility assignment or making purchases in a supermarket. The blind student should be expected to apply effective communications skills in specialized training such as this, as well as in all other aspects of schoolwork.

Lack of environmental stimulation leads some young blind children to develop "blindisms," that is, forms of self-stimulation, such as turning the head

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Mary Berkey is the chief switchboard operator at Northumberland State University. She has been blind all her life. Her job is a full-time one; she worked up to it over a period of 3 years after first being employed at the University as a department receptionist and part-time typist.

Mary uses electronic equipment called the Talking Telephone Directory (TTD). Upon receiving a call, she types the name on a keyboard like that of a typewriter. The TTD then speaks into her headset the correct number for that name, allowing her to connect the call. From name typing to number output takes less than one second. Blind operators with this equipment handle approximately 85 calls per hour. The average for sighted operators with conventional methods is 50 to 55 calls.

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rapidly, rocking back and forth, or poking the eyes with their fingers. Young children with only light perception will often "light play," that is, they will look directly at a light source while they move their hands and fingers back and forth very close to their eyes. Sighted persons who do not understand the reasons for these behaviors may be disturbed by them and may even misinterpret them as evidence of emotional disturbance.

Self-stimulation replaces external stimulation.

Blind children display the same range and proportion of mental and emotional disturbances as other children. Partially sighted persons, perhaps because they bestride the worlds of both the seeing and the blind, "tend to be less well-adjusted than either the blind or the seeing" (Lowenfeld, 1973, p. 55). They are subject to frustrations that are unknown to the sighted and the blind. Although they have sight, seeing requires effort and strain and may be efficient under some circumstances but not others. They may be able to see very well at close range; yet, they may not be able to stand close enough to read a street sign or the name of an approaching bus. If their fields of vision are very limited, they may give the impression of confusion as they try to integrate bit by bit all the information in a new environment. If they have difficulty with light, they may be blinded on entering a brightly lighted room or be unable to read the menu in a darkened restaurant.

Partially seeing children with very low vision may be misunderstood because of slow reactions or confused responses. In a brightly lighted, noisy cafeteria, for example, or a room in which the furniture has been moved about, or on a sunny playground where running children and shadows blur and shift, partially seeing children may have difficulty organizing their perceptions of what is around them. Their slowness, a response to a situation that is not visually clear, may be interpreted as a sign of mental retardation when adults are unthinking and impatient, and the interpretation may lead to depriving these children of needed help. More important, the interpretation may result in an educational program that is inappropriate for the child.

Misinterpretations can adversely affect individual programming.

High quality education for visually impaired pupils starts orientation and mobility training early. Use of auditory clues and the modern cane can build competence quickly. When the orientation and mobility instruction is carried out in the presence of seeing children, their understanding grows, as well.

Visually impaired children, whether blind or partially seeing, may be additionally handicapped by the misconceptions of adults. Vision limitations and inappropriate adult reactions to these limitations combine to slow the child's social-emotional maturation.

Appropriate expectations foster maturity.

If they seem immature, it may be because they have not had as wide a range of experiences as other children. They may have been held back from what are considered normal developmental experiences by their own lack of vision or the fears of parents or teachers. Sometimes too little is expected of visually impaired children in terms of achievement or social behavior; the result may be that they have not developed self-concepts or behaviors considered suitable for their age groups.

Prevailing Versus Preferred Practices

As in other chapters, this list of prevailing and preferred practices represents a contrast in certain domains in which progress is being made and in which progress will continue in the near future.

Social mainstreaming deserves careful attention.

Prevailing Practices	Preferred Practices
1. Public schools accept responsibility for educating visually impaired children at kindergarten age.	1. Search and outreach activities contact visually impaired children and begin their education, with family participation, as soon after birth as they can be located.
2. Children with visual impairments are mainstreamed for academic instruction, but social mainstreaming is often lacking.	2. Attention is given to both academic and social mainstreaming.
3. Children with visual impairments are taught mainly by one special vision teacher in cooperation with one or more regular teachers.	3. The school principal, parents, and all teachers work together to plan and conduct the educational program.
4. Special education teachers encourage regular class teachers to send exceptional children to resource rooms for much of their instructional needs.	4. Special education teachers learn consultative and team teaching skills so they can help regular class teachers instruct exceptional children in the regular class context all or most of the time.
5. The program for students with visual impairments is mainly academic.	5. Emphasis is given to social skills and development as well as academics; special in-school and out-of-school arrangements are made as necessary for experience and training in social areas and daily living skills.

Prevailing Practices	Preferred Practices
6. Few carefully designed support programs are available for postsecondary students with vision impairments.	6. Vocational schools, colleges, and graduate schools modify admissions and develop strong support programs for students with vision impairments in mainstreaming programs.
7. Residential schools for the blind operate as comprehensive alternative programs.	7. Residential schools serve specific needs, such as programming for multiply impaired students or offering short term training on special topics for students otherwise enrolled in mainstream programs.
8. Programs for visually impaired students operate separately from the rest of special education, with little sharing of concepts, materials, and techniques.	8. Specialists in work with visually impaired students exchange competencies and knowledge with other educators, working jointly on the educational problems of other exceptional children and youth.
9. Visually impaired persons with other impairments receive little attention, except for the deaf-blind.	9. Physical and social inclusion of multiply impaired students in regular schools provides them with a wider range of developmental opportunities.

Specialists should share their skills.

Characteristics of a Comprehensive Educational Program

Implementation requires commitment.

How can the characteristics of a comprehensive program of education and services for visually handicapped students be summarized? The following list amplifies the preferred practices just enumerated. It includes the variety of activities to which school board members, teachers, principals, parent groups, and other community leaders must make a commitment.

1. *Early education.* Preschool education should start at birth or as soon after as the impairment is discovered. It should be free and available as a public policy.
2. *Parent education.* As soon as vision impairments are identified it is important to provide services to parents, to give them information and guidance on child care, health care, training, procedures, resources available to the family, and schooling possibilities.

3. *Individualized school programs.* Children with visual impairments are different from each other in many ways. They need appropriately individualized programs.

Staff training is critical.

4. *A well oriented regular school staff.* Students with visual impairments and the right preschool preparation can be educated successfully in the mainstream of their local schools when regular teachers, school principals, and other school staff are selected, oriented, and suitably trained.
5. *High quality leadership by specially trained vision teachers.* High quality programs for children with visual impairments need well informed and skillful special teachers for consultation and team teaching with regular class teachers. Such specialists team teach regular class pupils and other exceptional children as well as give direct instruction to visually handicapped students.
6. *Materials and equipment.* The necessary braille, large print, and other material and equipment required by children with visual impairments is readily available at little or no cost. A full supply of what is needed, when it is needed, requires management and organization; that is one sign of a comprehensive school program.

Mainstreaming provides role models.

7. *Good models.* Students with vision handicaps, like all children, require good models in regular classes at all levels of the school. They should be both nonhandicapped and handicapped, children and adults, to help structure the children's own self-perceptions and lives.
8. *Career and personal counseling.* Students with vision impairments need to understand themselves in terms of their own strengths, weaknesses, patterns of satisfying activities, and aspirations; they also need help in making career plans. Full service school systems prepare teachers, psychologists, and counselors to understand and work effectively with visually impaired pupils in both elementary and secondary schools.
9. *Coordination of school and health services.* Children with vision problems need high quality, regular health care so that the condition of their eyes and visual functioning are well understood and all necessary treatments are offered. Health professionals also have much to contribute in the area of preventive programs and screening programs to locate new vision problems as they develop.

The Role of the Regular Class Teacher, Special Teacher, and Principal

Principals and regular teachers may be apprehensive when they first learn that a student with visual handicaps may be enrolled. That concern can be reduced by specialist team members available to assist with direct service, guidance, and responses to questions.

Teamwork with Specialists

School principals, counselors, psychologists, speech clinicians, and remedial teachers understand the value of team work with regular teachers and parents to resolve problems. When the problem involves plannning for a student with visual impairment, the special teacher of the vision impaired provides essential skills and expertise on that team.

The Special Teacher of the Visually Impaired Student

The special teacher supplements and complements the work of the regular teacher.

Certified instructors of visually impaired students may be employed as consultants, itinerant teachers, resource teachers, or teachers in specialized settings. They also may serve in supervisory and administrative roles. Regular teachers can expect vision teachers to:

1. Provide special materials, such as braille, large print, and recorded material, braille writers, typewriters, braille slates, and magnifiers.
2. Demonstrate proper use of special equipment (those listed above and others, such as the abacus, special maps, tape recorder, and records).
3. Assist in the assessment of students and in making referrals for additional studies, as needed.
4. Monitor general progress and specific problems and needs as each special student proceeds through the school program.
5. Participate in team planning sessions.
6. Help to advise and counsel parents and teachers.
7. Help to organize reader and brailling services.
8. Teach students orientation, mobility, and the use of residual vision.

An informative study of the functions of the teacher-consultant of children with visual handicaps is that of Moore and Peabody (1976). Participating were teachers from preschool through secondary schools; on the average, each had about 19 students. The following functional description of an itinerant teacher teaming with regular teachers was drawn from their work.

Direct instruction and driving take up the most time.

☐In a typical week, the teacher spends 19¼ hours in direct instruction of children; 1½ hours consulting with regular classroom teachers; 2½ hours in procurement and construction of materials; 2 hours in consultation with parents, other professionals, volunteers or community agencies; 2½ hours in administration (i.e., reports, meetings) or collecting information on referrals; and 5¼ hours driving, not including home to the first school and from the last.

Typically, eleven of the teacher's nineteen children are elementary and six are secondary partially seeing (visual learner) pupils. One is either a preschool visual learner or a multi-impaired visual learner in another special program. One is a nonvisual (blind) learner, most probably at the secondary level. Only thirteen children need regular service: eight of the elementary visual learners, four of the secondary visual learners, and the one nonvisual learner. Six children are visited infrequently during the year as requested by the regular teacher or for checking only.

The Vision Foundation, Inc. has updated and reprinted its Large Print Inventory. The inventory carries over 100 items, most of them free, including magazines, brochures, cookbooks, catalogs, and other informative resources in large print, braille, cassette, and disc. Free copies are available from Vision Foundation, Inc., 770 Centre Street, Newton MA 02158.

For the eight elementary visual learners who require regular service, the teacher consults with the classroom teacher and school nurse; assesses visual functioning of the child; and interprets medical information and visual functioning.[3]

Had conference with student and teacher on completion of daily assignments. (Effective)

Keeping records helps the itinerant teacher evaluate program effectiveness.

The teacher observes seven of these children in the school classroom and consults with the principal and parents . . .

Had conference with mother on kinds of behaviors that would be expected of her child as he changed from an elementary class to a large junior high. (Effective)

Advised parents not to have their first grader learn braille until absolutely necessary in spite of doctor's recommendation; two years later child is still doing well with large print. (Effective)

Could not get teachers to expect same quality of work from visually impaired students as from normal students. (Ineffective)

The teacher assesses the reading skills and helps teach reading to five of the children . . .

Made evaluation of student; discovered she was well below her level and arranged to place her in a special reading class. (Effective)

Reviewed picture of a rainbow with a partially seeing fifth grader who could not see a real one and whose reading assignment required knowing what one was. (Effective)

Three children also need assessment and assistance in mathematics, study skills, and independence in travel. For these, the teacher also consults with the school psychologist and provides guidance toward personal and social adjustment . . .

Helped clarify some conceptual problems relating to math of a second grader. (Effective)

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[3] Italicized statements are examples selected and adapted from teachers' reported "effective" and "ineffective" Critical Incidents.

Accompanied class on a field trip and described sights to the visually handicapped student in the class. (Effective)

One of the children, in addition, requires instruction in utilization of low vision aids, preparation of special materials, and instruction in motor skills and study skills (use of library, readers, recordings, etc.).

Arranged for partially seeing student to use films and remote control projector for supplementary materials. (Effective)

Used playing ball to improve eye-hand coordination. (Effective)

The teacher observes two of these youngsters in the school setting, assesses study skills, and provides guidance toward personal and social adjustment . . .

Tried to get mentally ill [sic] *high school student to go to Mental Hygiene Clinic where he had been previously referred.* (Ineffective)

Taught personal typing to partially seeing student and noted attitude change. (Effective)

Individual counseling facilitates adjustment.

Had several discussions with a high school student about drugs and alcohol. (Effective)

Answered questions on birth control asked by a 16 year old partially seeing girl about to be married. (Effective)

For one child, in addition, the teacher assesses listening ability, social skills, and reading performance; teaches study skills; and teaches the child about vocational opportunities, after consultation with the school psychologist.

Arranged for student to discuss advantages of vocational rehabilitation program with another student in high school who had rejected being referred and receiving services. (Effective)

For secondary nonvisual learners, the teacher procures materials, consults with the regular teacher, vocational counselor, nurse, guidance counselor, principal, and parents . . .

Encouraged blind student to submit her poems to a national children's magazine—published. (Effective)

Failed to convince newly blinded adolescent she needed to learn braille. (Ineffective)

Arranged for braille student to have reader service to prepare her for debate team; did some research myself for student and brailled information for her use. (Effective)

For the child in a preschool or in a program for severely multihandicapped children, the teacher will, on a regular basis, observe the child in the school setting, assess visual functioning, consult with the parents and classroom teacher to interpret medical information and visual functioning, and suggest environmental modifications to the classroom teacher...

Suggested projects for a teacher to use with a nonverbal very active partially seeing boy in a trainable class. (Effective)

Gave guidance department of a school district a push to get a mentally retarded student into vocational technical school despite his first rejection by the vocational technical school. (Effective) (Moore & Peabody, 1976, pp. 56–64) □

A Case Study

A combination of impairments can be managed.

Some pupils with more than one impairment move through regular schools with little or no difficulty if they get the right kinds of help at the right times. Georgeann, a 13 year old blind student, also has some orthopedic problems. Her gait is slow and awkward. She needs a hand rail to negotiate stairs. She has been assisted through a full year by regular teachers and a consulting vision teacher. This summary is adapted from one written by the special teacher in cooperation with Georgeann and her other teachers.

The academic objectives for Georgeann included: effective use of slate and stylus, introduction to Grade III braille, typing, review of abacus, writing her signature, writing and evaluating her own short term educational goals, and interpretation of maps, charts, graphs. Related objectives were learning to listen and learning to use conversational posture. Specific orientation and mobility objectives were not set.

She can use the slate and stylus for note taking, though Georgeann types most of her work. Her speed, format, and accuracy are acceptable. She overcame an initial difficulty in using quotation marks and knowing when to indent for paragraphs.

She can set up and work math problems, including problems with fractions, on the abacus. The concept of place value as it relates to fractions, percentages, and decimals is confusing to her and she is now working on it.

She can write her name in cursive form within the signature guide and she can use the check template. She has used the raised letters from the Optacon and identifies them easily.

A United States atlas and an African atlas have been provided for her. One hour was spent reviewing the keys to the atlas and she now uses them independently. Her listening skills within a group have improved.

Students help establish their own goals.

Everyone in the class sets goals. At the beginning of the year Georgeann began setting weekly goals for herself. At first they were very broad and difficult to accomplish in a week's time. Through work in her accountability group, Georgeann's goals have become more directed. She now puts her goals on a time table for the week and is much more successful in accomplishing them.

She received three hours of orientation and mobility evaluation or instruction per week for two months. Yet she remains a very dependent student capable of only slow and inefficient travel inside the classroom or home. To get around in the school building she required sighted assistance. She walks on the level adequately but slowly. Stairs can be used if she has a hand rail. Other children often carry her books.

The full range of orientation and mobility [instruction] will be necessary over the next several years if she wants to be able to travel outside routes with complex intersections. A complete course of instruction requires approximately 250 hours of sequential and intensive instruction. It may be necessary to reactivate physical and occupational therapy for her, too. At least, consultation is needed about that.

Recommendations for next year: Direct service by the vision teacher three or more times a week, continued consultation with regular teachers, and possible occupational and physical therapy coordinated with orientation and mobility instruction.

Planning, recording progress, and projecting new plans is an essential cycle for teachers.

Steps for Regular Teachers and Principals

Before a student with visual impairment enters school, a partnership should be established with regular teachers, the principal, the vision teacher, and the child's family. Together they plan any required adjustments in program, attitude, and equipment.

An early concern will be to introduce the visually impaired pupils to the spaces and places they must know. Take time at the beginning to walk with the children through the routes to be traveled. Explore and explain various parts of the classroom and school areas such as lavatories, exits, shops, gym, lunchroom, special rooms, and the principal's office. Special alerts should be given to obstructions and danger points, such as drinking fountains and staircases. Visually impaired children will need to be alerted when changes are made in routes or room arrangements. The special vision teacher assists in orientation activities and often offers direct instruction on the use of the white cane and other mobility activities. Much can be done, though, by regular teachers.

Independence is the objective.

In travel and orientation the aim is for independence. Once the child forms a cognitive map of the school and makes a good start on independent travel, expect consistent independent performance. Overprotection is a great disfavor.

The child should also learn to travel outside the school in an independent way, using the same means of transportation as other children. Sometimes children with visual impairments are carried to school in private taxis or special buses. Occasionally this may still be required, but generally such arrangements are not necessary and should be minimized.

Avoid overprotection.

Vigorous physical activities should be part of the school program, unless there are health reasons for limiting them. It is best to integrate the child into regular physical education activities with only essential adaptations. Visually impaired students need to learn the rules of common games—even those they may not engage in regularly—and the principles of fair play.

Provide a place where the child can store necessary special equipment and remove it for use as needed. Taking care of the equipment and storing it carefully and consistently should be the child's responsibility.

Adult behavior shapes children's attitudes.

Teachers, principals, and parents may be apprehensive about the attitudes of other children. Will they be unkind or overprotective? The best prediction is that other children will carry the same attitudes into their relationships with the child who has vision problems as they observe in the behavior of adults. Children tend to be realistic; they enjoy helping a classmate who genuinely needs help, but they dislike dependency. To help them understand their new classmate, give them facts about the situation, including the nature of the child's impairment and any special materials and equipment that may be used.

In general, standards of behavior, classroom duties and privileges, and work assignments should be the same for the child with vision impairments as for all others. The principal can help all staff members in the building understand what the expectations are. Grading need not be a special concern, either. All children should receive individualized instruction according to their developmental needs; in such a context, the child with visual impairments need not be nearly so "different" as first anticipated.

Minimal changes in curriculum, but major changes in presenting curriculum, are needed.

Not many changes in curriculum are required specifically because of vision impairment. Certain listening skills do need to be taught, however, as do certain mental mapping skills. But such curricular adaptations are relatively few. It is often necessary, though, to use special materials to *present* the curriculum (i.e., large print books or braille). It may be necessary to obtain or devise special substitutes for visual aids. Vision teachers know how to help with this. Fellow students are also quite ingenious in designing substitutes. One example is the use of string diagrams (string glued to paper) to replace visual mathematical charts. It may be necessary to use volunteers who read for the student, either directly, or on audio tapes. If a student uses braille, the vision teacher assigned to work with the regular teacher—and possibly a specially trained aide or volunteer—will help to prepare assignments and tests and translate the student's braille responses. Some regular teachers learn braille, reading it visually rather than by touch, but it is not a necessity that they master it.

No special extracurricular program is needed. With careful preplanning and a few modifications, the student with visual impairments can profit from every type of activity: field trips, student government, debate, art, music, publications, athletics, and others.

"Seeing the Unseen" is an exhibit of art works created specifically for blind persons. It was shown recently in one of the large cities of North America, where it attracted both blind and seeing viewers plus considerable critical acclaim. More than 30 items by 26 artists were selected for the exhibit. Media included such materials as wood, alabaster, terra cotta, leaded glass, aluminium, bronze, jute, wool, ceramic, and paper.

Adjustable scheduling helps the vision teacher to offer the specialized instruction the student might need. Quite often school systems offer special intensive training programs during the summer months on braille, orientation, and mobility to avoid excessive interruption of the regular flow of school work during the academic year.

It is advisable to prepare one or two dependable seeing students to assist the student with visual impairments in case of special need. For example, although most students with vision problems can perform quite adequately in fire drills or other real or simulated emergencies, it is wise to have a special arrangement for assistance, a buddy system if needed. Teachers should check their liability coverage for emergency situations and for regular school activities that have dangerous aspects, but there need be no serious problems on this account.

Emergency procedures should be formulated.

Does it all really work? Usually progress is quite adequate. Indeed, programs in regular schools for children with vision impairments frequently become the source of feelings of great pride and satisfaction by teachers, administrators, and parents. But, of course, the story is not always one of unmixed progress. Appraisal must go on constantly and when difficulties occur, changes are indicated. Even with best efforts, problems sometimes mount to serious proportions and a major change in program may be required. Perhaps, for a time, a program outside the regular class will be required. But the general rule is success in the mainstream, both academic and personal/social.

Summary

What Every School with Visually Impaired Pupils Should Have

This list should help principals and teachers to check their preparedness for educating blind and partially seeing pupils, whether the youngsters are transfers from elsewhere or part of the student body since kindergarten. Of course, the number and nature of the pupils will influence the way the these listed resources are deployed.

Personnel

The checklist is a vehicle for self evaluation.

☐ Teacher-consultant qualified to instruct visually impaired pupils.
☐ Orientation and mobility training specialist available.
☐ Regular administration and faculty oriented to work with visually impaired pupils.
☐ Pupil personnel staff (counselor, nurse, social worker, psychologist) capable of working with vision impaired pupils and with access to specialist consultation as needed.
☐ Service staff of school (secretarial, custodial, food services) acquainted with special considerations for visually impaired pupils.
☐ Braillists and readers to assist as needed.
☐ Volunteers and aides trained to work with visually impaired pupils.

Pupils

☐ Student body oriented to visually impaired pupils.
☐ Seeing pupils assigned to participate in "buddy system" for travel, safety, and related activities with visually impaired pupils.
☐ Pupil-specific materials needed for day to day work (i.e., magnifiers, tape recorders, batteries, typewriters).
☐ Ready access to class-inclusion instructional materials such as talking books, brailled books, large type books, and voice response computers.

Facilities and Arrangements

☐ Audible or tactual substitutes for visual signals where needed (i.e., texture footing change at stairs and doorways, audible danger signs, brailled names on doors).
☐ Braille numbers and directions on telephones and switches or attached magnifiers with lights.
☐ Emergency local resource persons and materials (i.e., first aid, alarm) and their locations, if needed by visually impaired student, by teacher, or by support staff.
☐ Auditory alarm signals and procedure for fire and evacuation.

Continuing Education

☐ Annual inservice update for faculty and support staff on developments in special education.
☐ Special orientation on call for new or substitute faculty or support staff.

Prospects for the Future

The need for skilled teachers will increase.

It is unlikely in the foreseeable future that there will be any reduction in the need for teachers for visually impaired pupils. Rather, the need will probably increase. Education of children and youth with vision impairments presents outstanding career opportunities to young people who wish to prepare themselves for such work. The greatest demand is for vision teachers who are highly skilled in teaching braille, mobility, orientation, and related special subjects. Need also exists for professionals prepared to work with multiply handicapped students, such as the retarded-blind and the deaf-blind. Several special centers prepare orientation and mobility instructors. Opportunities are emerging for persons who undertake truly broad preparation in special education and who are in a position to assume support roles across a variety of the traditional categories of handicapping conditions. For example, a teacher might prepare to conduct a general resource room in a school and to develop skills to serve children who need braille or other specialized forms of instruction when that is needed. A critical need also exists for investigators who will give attention to pressing educational research and development problems.

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CHAPTER 13

Severe/Profound Impairments

Chapter Outline

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The Challenge to Educators

We in America have a long history of segregating severely and profoundly impaired individuals in separate and usually distant places. Practice in the Western world for many years was to construct and staff special institutions to house, educate, and care for these very exceptional persons apart from society's main current. It is only natural, then, that many principals, teachers, and parents might wonder why it is now preferred practice for severely and profoundly impaired children to attend regular schools.

Past practices are changing.

This shift in societal attitudes and resultant expectations for educational programming are the focus of this chapter. An exploration of definitions and related considerations sets the stage for a fuller understanding of the needs of severely and profoundly impaired persons. First, however, the story of Adele describes the problems and experiences of one family, as well as possibilities for progress.

☐ Adele was a great worry to her parents from the moment of birth. Her delivery was difficult and much delayed. Fears were magnified during the first months of life because of great difficulties in feeding and the high frequency of health problems of many kinds. Adele's mother was unable to give needed attention to her two older children, and family tensions mounted.

Adele's problems affected the family dramatically.

Within the first year it was clear that Adele suffered a severe case of cerebral palsy. She was severely uncoordinated in motor behavior on both sides of the body. The concern then spread to mental ability.

Because the family lived in a small, rural town which had only part-time medical service provided by a family-practice physician, Adele and her parents were referred to a clinic located in a large city, 150 miles away. For the first five years of her life Adele was transported back and forth to the clinic frequently. The family was alerted to services available to preschoolers in the city environment, but Adele's mother preferred to keep her at home, in spite of the constant and extraordinary care required in feeding and bodily care.

At age 5 Adele showed few signs of talking. Her physical limitations prevented all but the simplest kinds of functions. She could swallow food with difficulty, but was unable to sit up or crawl. She still needed help in toileting.

Adele's parents attended occasional meetings of the County Cerebral Palsy Association and found it helpful to share experiences with other parents. But gradually the father and mother came to hold different opinions about Adele's future. The father was persuaded that Adele was profoundly and irreversibly retarded in intellectual abilities as well as in motor functions; the mother felt strongly that Adele would some day begin to develop and eventually overcome her problems, so that she could live in a semi-independent way. When Adele was refused admission to the local school, which had no special education program for profoundly handicapped children, her mother became all the more determined to help Adele at home. Tensions mounted and finally the parents separated.

Adele and her mother moved to the city, where Adele was enrolled in a special school for severely/profoundly impaired (SPI) children. Progress in schooling was slow. At age 10, however, Adele showed beginning ability to respond to a Symbol Board (a board containing small pictures which Adele could point to in communications with her teachers). From there progress continued slowly. The mother was able to take a job and work while Adele was in school in order to help provide the financial support they needed.

Group home living was eventually achieved.

By age 22, Adele had progressed sufficiently to be placed in a group home in her community. There she still requires much supportive help, but she has learned to speak in simple fashion and to handle most of her own bodily needs. She lives with other handicapped persons and goes each day, by special bus, to a sheltered workshop where she is learning to perform simple task sequences and to care more fully for herself in daily life. Adele's mother, still separated from her husband and the other two children, visits Adele frequently while continuing on the job she started some 15 years ago.

If Adele were born today it is likely that she and her family would receive many more supports early in life. It is much more likely that she would be accepted in the local schools, even in a rural area. More technical aids would be available to provide Adele with communications skills at the earliest possible age. Because her parents would be likely to receive more help, as well, it is possible that the family would be better able to maintain itself and grow with Adele. ☐

Definitions

Classification as SPI may be only temporary.

The expression severely and profoundly impaired (SPI) is a special education code phrase. It includes children who are presently incapable of self-maintenance, even though they have reached the age when most other children are showing that capability. SPI children have practically no communication skills, and they relate to others in only fleeting and apparently shallow ways. Many have barely sufficient motor development for crawling or reaching or grasping, though others may have relatively well developed motor skills.

Apparent severe retardation is the main defining characteristic of SPI.

The main characteristic that admits children to the SPI group is their apparent gross retardation, the seeming absence of or practically complete and early derailment of cognitive development and, to a great degree, of affective development. In the SPI group are youngsters whom physicians and clinical psychologists might call mentally retarded, autistic, or schizophrenic. Many of these children's conditions are further complicated by sensory defects, particularly in vision and hearing. Neurological or orthopedic factors are frequently present, too, like cerebral palsy, spina bifida, or hydrocephaly.

In short, children encompassed by the code phrase SPI[1] present an extremely complex picture. They offer little apparent prospect of acquiring what is conventionally called an academic education; their prospects for becoming socially and vocationally independent seem sharply limited, too. As we shall see, though, these appearances may be deceiving.

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[1] Another code phrase employed by special educators is *low incidence handicaps.* It simply means that they occur infrequently, in contrast to other conditions (e.g., speech defects) that turn up much more often. The severe and profound impairments described here are of low frequency. So, too, for instance, are blindness and deafness, but blindness and deafness as such, unless accompanied by apparently grave cognitive deficits, would not be included in the severely and profoundly impaired group.

Terms like *mild, moderate, severe,* and *profound* seem to enter the literature on handicapping conditions inconsistently, despite or because of their vagueness. An important inconsistency arises in the use of these modifiers (like *mild* or *severe*) because educators often use them differently from other professionals. A condition such as blindness is certainly a severe or profound *impairment,* and blindness may appear to many to be a very severe *handicap,* yet from the educator's view it presents a far less complex educational problem than do some other conditions. It can be said with some truth that students who show mild and moderate degrees of impairments or handicaps have much more often been part of the professional and personal lives of most teachers and school principals than have students with more severe or profound impairments or handicaps. This statement is true for at least two reasons: (a) there are many more persons with mild and moderate degrees of impairments and handicaps; and (b) they usually can be integrated into regular school and community life more easily. But even people with severe and profound handicaps are now being integrated into the regular schools, and it is important to be aware of them in order to accept the challenge of serving them effectively.

Regular teachers are now more likely to encounter mild and moderately handicapped children.

Stevens (1962) suggested a distinction among the terms *impairment, disability,* and *handicap* which serves our purposes here. By *impairment* he referred to defective tissue (e.g., a diseased or disordered muscle); *disability* is used for the loss of organ function (e.g., a knee that will not bend); and *handicap* refers to the personal or social burden imposed upon an individual because of an impairment or disability. A person who is disabled by the paralysis of both legs may become so adept at managing a wheelchair and other technical aids that the term *handicap* would hardly be applicable. Although the three terms are used in this chapter according to Stevens' distinctions, readers should be aware that the terms are used variously and even interchangeably in current literature on handicapped persons. Stevens' definitions were offered originally only

An Approach to Definition

"The severely handicapped individual is one whose ability to provide for his or her own basic life-sustaining and safety needs is so limited, relative to the proficiency expected on the basis of chronological age, that it could pose a serious threat to his or her survival.

" 'Basic life-sustaining and safety needs' are defined as those requirements necessary for maintaining and furnishing nourishment to one's body and for avoiding, defending against, or escaping physical harm. Requisite skills include self-care (feeding, toileting, dressing, grooming), communication and physical mobility. . . . To ensure one's safety further requires that one maintain contact with reality and refrain from self-mutilation." (Baker, 1979, pp. 60–61)

for physical handicaps but are useful in making the general distinction between inherent disabilities and functional handicaps. It is not the impairment or the disability, but the functional handicap (difficulty in acquiring a normal education) that educators are talking about when they use the term *severe/profound.*

Some disabilities do not result in handicaps.

The important point noted here is that *there is no direct or necessary connection between a disability and a handicap.* Technical aids, unusually high motivation, compensatory skills, and supportive social environments all can mitigate the effects of a disability and lessen the likelihood or degree of associated handicaps. Thus, when we speak of persons as severely or profoundly impaired (SPI), we are saying something about a very complex and constantly changing set of circumstances. When we speak of SPI children, we are saying something about their need to be understood and served in the schools, but we can make no reliable prediction about their future status as adults.

What are the ways in which one can be handicapped? Prehm and McDonald (1979) and subsequent investigators suggested five possible general areas of handicapping condition, and they used this framework to define handicapped children. These five areas are motor, self-help, cognitive, personal-social, and vocational skills.

The central defining characteristic of a severe/profound handicap is extreme inadequacy in *cognitive functioning* which then encompasses all other kinds of handicaps. The person shows little, if any, language; is unresponsive to ordinary social stimuli; fails to develop self-help skills; and completely lacks vocational skills. The SPI person may be vegetative (extremely nonresponsive) or hyperactive, but, in either case, shows little evidence of rationality or judgment. It should be noted that the definition is in *functional* terms, which is meant to imply that the behavior need not always remain so extreme.

Educators are increasingly successful in reducing severe/profound handicaps.

Some children who show severe/profound impairments in early life are demonstrated, through very intensive diagnosis and instruction, to have specific problems which can be treated with favorable results, and such children may progress in ways which make them less handicapped. For example, children who are both totally deaf and blind are likely also to be severely limited in cognitive functioning unless and until specialized methods of teaching are applied. Similarly, some children who exhibit irrational, even bizarre, behavior may gradually respond to intensive treatment and come to be understood principally in terms of personality problems. Through time such children may show improvements in functional intelligence and no longer be classified as profoundly handicapped.

In recent decades special educators have led an assault upon the classification of children as hopelessly severely/profoundly handicapped. Many children formerly considered hopeless have been taught by informed and caring teachers and raised from levels of profound impassivity or destructiveness to a level of purposive behavior in at least simple social settings. In the process of this work special educators have demonstrated that SPI children are greatly heterogeneous in fundamental characteristics. They have in common, in the beginning, a profound functional handicap in cognition, plus many other problems, but with good efforts the problem tends to differentiate and it becomes possible to distinguish a variety of handicapping conditions, some of them treatable with positive outcomes.

In this context it becomes clear that severe/profound handicaps are a function not only of the characteristics of the individual but of the person's life situation as well. If that life situation includes people who have the necessary technical skill to diagnose and teach in special ways, the likelihood of individuals remaining SPI is reduced. There are conditions of severe handicap which no one currently understands or can reverse through education. The insult may have been too great ever to be overcome; but it is impossible to be precise about the extent to which SPI problems might eventually be remediable. The struggle for educational solutions goes on.

Guidelines for degree of handicap change as educational technology advances.

Actually, there are no hard and fast rules for characterizing levels of handicap. Viewpoints change when new or adapted educational technology makes it more feasible to meet the educational needs of an exceptional child. For example, a new procedure for eliminating stuttering (Shames & Florance, 1980) promises to move that condition from the severe toward the mild level. Several decades ago, the invention of individual electronic hearing aids allowed a major educational shift for some hard-of-hearing persons, just as the development of the braille reading and writing system opened a whole new world to blind people. In this chapter, central attention is given to the extreme SPI condition characterized by very limited cognitive functioning, (usually) accompanied by other handicaps as well. But attention is given also to some of the less extreme handicapping conditions that tend to emerge as those children who show the most extreme handicaps are given good attention and help.

What all SPI persons have in common, unless they are aided effectively, is a significant limitation on the range of purposes and goals which can be set for their lives, the skills that they are able to develop in pursuit of such purposes and goals, and the joys and rewards of life in which they can share. The challenge to educators, other professionals, and researchers is to serve fully and well all current SPI persons and, also, to help advance the frontiers of knowledge and skill so that more can be done for these persons in the future. The boundaries of knowledge, skill, and service delivery delineate the extent of freedom for SPI persons.

Because a number of special concepts and terms are used commonly in this chapter and in other discussions of severely and profoundly handicapped persons, a brief set of additional definitions is offered here.

Deinstitutionalization refers to the declining use of residential institutions as placements for handicapped persons. Admission rates have been reduced and residents are returned to the community whenever possible. Related aspects include adherence to the due process and other legal rights of handicapped persons, the development of habilitation and transition programs for institution residents, and the rapid development of appropriate community resources to serve persons who otherwise would be in institutions. Unfortunately, no aspect proceeds perfectly (Bruininks & Bruininks, 1981).

Normalization is a principle developed by Nirje (1969) and advocated in the U.S. and Canada, notably by Wolfensberger (1972). It argues for the "normal" treatment of handicapped persons in normal or everyday environments to the maximum possible extent (Flynn & Nitsch, 1980).

Knowledge of common terms is professionally useful.

The term *developmental disabilities* gained widespread use with Congressional passage of the Developmental Disabilities Act in 1970. Under this act, local and state programs for SPI persons began. Early efforts built upon work with persons classed as mentally retarded, but through the years other exceptional conditions were added. Public Law 94–103 (1975) defined developmental disabilities as being attributable to mental retardation, cerebral palsy, epilepsy, autism (or dyslexia resulting from these), or other conditions closely related to mental retardation in terms of intellectual and adaptive problems. For purposes of legal definition, the handicap must originate in the developmental period (conception to age 18), must be expected to continue indefinitely, and must be substantial.

Developmental programming is systematic, sequential instruction that is based on the assumption that all persons can learn to some degree, whatever the nature and extent of their impairment. Furthermore, it is assumed that people learn best in environments that offer them the opportunity to learn through orderly, structured steps that take into account what they already know. Many varieties of task sequences for diagnosis and teaching have been developed.

"*Infantilizing*" is overprotecting and creating dependency in SPI persons. Expectations for development are low and adult behavior is not expected.

"*Adultizing*" is the opposite of "infantilizing." It means giving the SPI person every opportunity and encouragement to become as self-sufficient as possible in mobility, self-help, social relationships, and work.

The *sheltered workshop* is a specialized training and work setting for persons who lack the readiness for competitive community employment. In the sheltered workshop, individuals receive training in general and specific work skills plus on-the-job work experience. The workshop often engages in industrial tasks (such as sorting or assembling items) on contracts with local businesses and industries; on this basis it is able to offer the workers hourly pay. Training in daily living, social skills, financial management, grooming, and similar topics is usually a part of the total program. Assistance in gaining less sheltered employment is offered when individuals show readiness.

Community living arrangements (CLA) are small group homes or foster home situations created specifically to house and supervise persons who are not yet capable of fully independent living. Often CLA's are used to serve individuals who have been discharged from institutions and are seeking gradual integration into community life. Group homes are usually managed by persons (often married couples) who have broad interest in education and social services of all kinds. Residents of group homes or foster homes frequently are enrolled in sheltered workshops for training and employment.

Under federal law, each state is required to designate one or more agencies to operate a *vocational rehabilitation* (*VR*) program for handicapped persons.

The services which must be provided include diagnostic and evaluation services; counseling and guidance; medical services; training; income maintenance; transportation; family services; interpreting services for the deaf; readers services for the blind; telecommunications, sensory, and other technical aids and devices; job placement services; and post-employment support to maintain suitable employment. A vocational rehabilitation counselor is assigned to each client and acts to purchase and arrange necessary programs. Concerns are often expressed that VR services exclude many SPI persons in favor of clients whose employability is easier to establish.

Health Considerations

The number of SPI children is increasing. The survival rate among premature infants has gone up quite steadily, and many infants who suffer difficult births or who show congenital (at birth) anomalies are kept alive. The disabilities found in the wake of these higher survival rates are significant in number. Thus we have the ironic condition that improved health services have increased the numbers of persons with impairments, disabilities, and handicaps.

Incidence rates for severe and profound handicaps are increasing.

Canadian Hospital Teams Aid in "Mainstreaming"

Initiated in February 1974, with one part-time team travelling to a target area of the city twelve miles distant from the hospital, the Project presently operates three full-time teams and one part-time team. Each team includes a physiotherapist, occupational therapist and speech-language pathologist who travel together daily to specific quadrants of the City of Calgary. They provide therapy to the children on-site in the community programs and also help ease the process of integration through supportive consultation to teachers and parents. Vans to transport the teams and their equipment are donated by the Calgary Shrine Club. Three or four children are grouped in some preschool facilities to maximize efficient use of resources.

Through gradual phases of growth, beginning with the transfer of five children, the Project has, in five years, integrated 128 children from the specialized segregated hospital programs. An additional 186 children, referred to the Project by Hospital clinics and departments, have been maintained in their neighborhood facilities.

Initially, mild and moderately handicapped children were placed in community daycare centres, nursery schools, kindergartens and schools. More recently, severely physically handicapped children have been accepted in the project. The age range extended from two to sixteen years. Forty-three percent are in the preschool programs, while the majority of school-aged children under treatment are in the first or second grade. (Cripps & Innes, 1980, pp. 1–2)

Many children with severe and profound handicaps are readily discovered in infancy or early childhood by physicians, nurses, or other health professionals. Marked delays in language and motor development sometimes give clear indication of problems. Sometimes parents who suspect delays in their children's development, or become anxious about their limited functions, will themselves seek medical or psychological advice. Certainly it is helpful if these children, in their very early years, are subjects of joint planning by parents and health professionals. It is well to bring early childhood educators with special education training into such planning, too. Pediatricians, hospital nurses, and other health professionals may tend to focus solely on the severe physical impairments they encounter among infants, and not be so aware of how educational procedures can stimulate flagging development.

Educators can provide a helpful perspective.

Increasingly, physicians are able to treat disabilities in early years, thereby often preventing handicapping conditions that otherwise would be likely to develop at a later period. For example, it is now common to use surgical procedures to provide a shunt for the excessive fluid that sometimes develops in a baby's head and which, if left untreated, can cause severe mental retardation. Metabolic and genetic studies reveal other disorders, such as phenylketonuria which, if untreated, leads to mental retardation; when it is treated by a special diet it may have only limited effects on development.

Much work still must be done to achieve good medical services for all children. Screening tests at infancy are not yet performed routinely on all children; only a small proportion of young children are screened for health problems and, unfortunately, the followup diagnostic studies sometimes are performed poorly.

The incidence of SPI increases with age and accelerates in later life. Someone has suggested that the population of the whole world can be divided into the handicapped and the temporarily nonhandicapped, thus reminding us that limitations in functional areas (e.g., mobility) tend to be the eventual fate of all persons. Because of increased longevity, the numbers and percentages of people with severe handicapping conditions are increasing steadily. One result is a large increase in the demands on health services.

Educational Considerations

SPI children are leaving the isolation of homes and institutions to enter regular schools.

Severely and profoundly handicapped children, for reasons society believes are sound, are entering their local schools. They are coming from homes where they have been isolated and from institutions where they have been sequestered. They bring with them many problems for school administrators as well as for regular and special teachers.

Residential Settings

America's citizens have grown grievously and increasingly disappointed in most public and private residential institutions that were supposed to rehabilitate SPI individuals. Important efforts are under way to change the functions of such institutions and to bring them up to new standards of educational excellence. Their former all-purpose, long-term containment functions are not being renewed. Instead, they are now being expected to serve highly intense, short-term needs. Family members and local school representatives are also more closely involved in the ongoing work of residential institutions.

The functions of institutions are changing, and community services have improved.

Almost all of the special education and rehabilitation that residential institutions were formerly supposed to do can now be accomplished in the local community and in the local schools at some level of physical, social, or instructional mainstreaming. Sometimes it can be done more effectively and efficiently, too. As to effectiveness, residential institutions, particularly those distant from population centers, often could not attract the most expert special educators and related professionals. As to efficiency, special education technology and services have, in recent years, been made more adaptable, easier to use, and very portable. Many special education procedures and materials, though designed for specific applications to a finite and small population, are now being used in a great variety of ways to meet the needs of many different sorts of pupils. At the same time, special educators are being prepared to work in a broad, noncategorical way, not merely with specific categories of exceptionality as delineated by teacher training programs of the recent past.

Thus, there are no longer the same needs for the same kinds of special residential institutions that there once were. Certain needs remain that can best be served in residential school settings, but these needs are fewer in number, more highly specialized, covering shorter time periods in the pupil's life, and more tightly linked to regular school and community programs. Economic considerations come into play, too. The per-pupil cost of residential schooling is very much influenced by the need to house, feed, and supervise pupils at public expense. That cost is largely unproductive, educationally speaking.

The expectation of inclusion provides motivation.

The goal or expectation of being part of a regular school is a powerful incentive for the parents, for the child, and for professional persons working with the SPI child. That expectation is especially important in the preschool years. Looking forward to participation in at least some of the daily life of children in school is extremely different from looking ahead only to a solitary, limited life at home or to the institutional life that almost inevitably retreats from the stimulating realities of the external world.

Special Day Schools

But isn't there an intermediate step? Isn't it better to establish a special center in the community just for SPI pupils? Wouldn't a special day school, apart from the regular school, be the ideal? Couldn't the children who attend such a center thus have the advantages of life at home with their families and still receive the full attention they need from competent and highly motivated professionals? Wouldn't the prospect of continuing education in a special day center, with all its excellent facilities and staff, supply a very high incentive for the parents and the child? For children and youth found to be severely and profoundly impaired, why is it important or desirable that they attend regular schools? Specifically, what are the advantages to them? To others?

One of education's main objectives is to prepare the individual for life outside the school—the life of the home, the community. That applies to all persons, handicapped and nonhandicapped, with equal force.

Most advantages of the special day school can be achieved in regular schools.

Special, centralized day schools for exceptional children are nearer to what is needed than are separate residential settings. Separate residential schools, or schools within institutions, tend to be farther away from the child's home, both in actual distance in and in lifestyle, than special day schools to which children are transported daily. Thus, the latter does allow the child much more family and neighborhood life. Also, the faculty of the special day school can more readily have access to specialists and can share in the use of instructional materials, technical equipment, and other resources that are available through the school system and other community support systems.

The Regular School Setting

The positive and favorable qualities found in special day schools can, however, be made part of the regular school. In contrast, there are significant elements of a sound and complete education that are difficult or impossible to supply when a SPI child attends a separate, special day school. These elements can readily be provided by regular schools, and many have done so.

For example, interaction between severely and profoundly impaired children and other children is a very important plus that can be part of daily life when both are in the same physical setting. Such interaction is mutually beneficial; each has something to give to and to gain from the other. That advantage can be capitalized on in the regular school environment.

A large part of the teacher's work with severely and profoundly impaired children consists of stimulating them to attend to sounds, sights, and other contacts with the environment. The more such attention can be established and consciously controlled by the impaired child, the better the child's chances of establishing a degree of independent action. Another significant portion of the teacher's work with these impaired children is to construct, step by step, some meaningful system of communication with them. That may take years. It may be established through pointing to pictures, through eye-blinks, through Morse code or special language boards, or by a means that the teacher and the child invent together, over long months of trying to establish contact with each other's thoughts. The "real world" of the regular school can be engineered to promote the motivation and the means for communication.

Evidence of cognitive ability is sometimes masked by other problems.

When the level of intelligence, the intellectual development, of severely and profoundly impaired children was discussed earlier, it was said that characteristically there is *apparently* gross impoverishment or practically complete and early derailment of cognitive development. The word *apparently* is the key. Only by intensive and extensive efforts to teach the child can it be determined whether there is actual and irremediable intellectual deficit or whether the child has a potentially active mind that is masked by sensory, neurological, emotional, social, or other inhibitors.

Thus, the main point of the teacher's efforts to stimulate attending behavior and create communication bridges is to bring out and put to constructive use whatever cognitive powers the impaired child has. That is consistent with the basic meaning of *education,* from the Latin root meaning "to lead out."

The rewarding part of the teacher's work is to see positive changes take place in a child's cognitive interactions with the world, even small positive changes. From time to time, though, the changes are great. Sometimes a teacher finds the key to unlock a robust intellect that had been imprisoned for years, locked behind a facade of *apparent* absence of cognitive powers.

All children profit from experience in the "real" world.

When severely and profoundly impaired children are taught in the same building with regular classes, the general atmosphere *is* that of the real world. It does not have to be fabricated or simulated. Even in regular schools, the impaired children are usually kept much to themselves. But they do see other children and are seen by them. Moreover, children from regular classes hold doors open for them, say "Hi" when they pass in the hall, and in countless other ways are a real part of their daily life. It is common, also, for individual children from regular classes to volunteer to help in the teaching and recreation activities of the impaired pupils. In a very similar way the interactions between special and regular teachers grow, and so do parent interactions in the school and community. They build and maintain a subtle though solid base for promoting progressive inclusion. These important elements of normalization are much less likely to develop in separate schools.

When SPI children are served in regular schools, there are understandable debates and tension concerning the curriculum that should be provided for them. Some educators argue (Burton & Hirschoren, 1979):

> Once again we are in danger of embarking on a program for a handicapped population, while lacking the knowledge base to support our efforts and we are unfortunately committing ourselves to doing before we know what needs to be done.... Let us not sacrifice the child to the concept by forcing, for our own edification, normal educational experiences and expectations on them. (p. 599)

Achievement expectations need to be flexible and individualized.

Others argue strongly "that attempts at setting limits regarding severely and profoundly handicapped learners encourage the risk of developing yet another self fulfilling prophecy in the field of special education" (Sontag, Certo, & Button, 1979, p. 605). This debate is reminiscent of the comparable debate in the 1950's that centered on so-called "trainable retarded" children. Probably there is no clear answer to issues of curricular expectations for broad groups of children. Solutions need to be found case by case in the context of developmental programming. Tensions will probably always exist between those who wish to be conservatively "realistic" about children, especially in creating parental expectations, and those more hopeful professionals who find it hard to be sure about limits but who see new frontiers being reached quite regularly.

Social Considerations

As more and more severely and profoundly handicapped individuals remain in the community rather than being placed in separate, closed institutional environments, the challenges to all community institutions mount rapidly. Attention must be given to recreation, housing, employment, protection, travel, independent living, family burdens, financial needs and management, crisis management, and much more.

Community facilities have proliferated.

A concomitant of the deinstitutionalization movement has been the rapid development of community residential facilities for SPI persons, mostly in the form of group living arrangements. It has been estimated that in the period 1973 to 1977 the number of such community facilities doubled in the United States (Bruininks, Hauber, & Kudla, 1979). Even to keep records of SPI individuals has become a massive problem because of the increase in the number of widely dispersed small-group homes. At the same time, the challenge to local social agencies to provide high quality social services for group-home residents has accelerated.

Various federally sponsored social programs that call for operations outside of schools have been launched. For example, the U.S. Social Security Administration provides Supplementary Security Income (SSI) to SPI children under certain conditions. Food assistance, outpatient and inpatient psychiatric services, and early education programs are also provided. All these programs require the attention of community social agencies; often they must coordinate their concerns with those of the schools and health agencies.

Special Problem Areas

The term *severely and profoundly impaired* obviously covers a very heterogeneous group of persons, many having more than one identifiable impairment. We can identify a number of dyads, for example, deaf-retarded, and retarded-blind. The presence of speech or behavior problems can turn each dyad into a triad. The following discussion centers on several of the common dyads and on cerebral palsy, an impairment that often includes more than two disabilities. Two conditions are also discussed that are often difficult to distinguish until instruction has been attempted for some time: they are autism and severe mental retardation. A longer section is devoted to mental retardation in order to attend to the major shift from institutional to community-based programming.

Sensory Dyads

Deaf-retarded and blind-retarded children are not beyond teaching in today's schools.

Being deaf or hard of hearing poses a recognizable educational difficutly under the best of conditions. When hearing impairment is compounded with severe intellectual limitations, the result taxes the skills of all special and regular educators.

The needs of hearing impaired/retarded pupils, however, are not beyond the capabilities of today's educators. The first step is to assess the pupil's educational needs and to devise plans to meet them. The assessment inevitably specifies critical needs in the areas of language and communications, as well as important needs in social-emotional development and self-help skills.

In almost all cases, deliberate cognitive stimulation appears to be a need, because a combination of handicaps tends to sharply reduce a child's interaction with the ordinary environment and, thus, its normal effects on intellectual development. For example, inability to hear cuts off sounds, a major source of cognitive stimulation. Similarly, the blind-retarded child will also need special stimulation. Inability to see often means difficulty in mobility as well; thus, the child is limited in both visual and tactual stimulation. The sensory dyads frequently are further confounded by emotional problems that can reduce sensitivity to the outside world.

The plans devised to satisfy multihandicapped pupil needs often are adaptations of plans that can be used for pupils with single handicaps. For instance, deaf-retarded children need to acquire the use of language in all its ramifications and "listening" to others in whatever mode works. The process makes maximum use of whatever sense modalities are intact, usually sight, touch, and smell.

SPI adolescents and adults reach for independence, just as others do.

Like the rest of humankind, adolescents and young adults with multiple handicaps reach for independence and life satisfaction. Knowledge, experience, and adjustment must be integrated successfully to achieve those goals. A teacher/counselor model for hearing impaired young people with additional handicaps has emerged in response to the need. Pawelski and Groveman (1979) described such a model:

> A teacher/counselor is . . . an "active listener." Too often the problems of these students are caused not by their lack of skill, but by their inability to form relationships or respond appropriately in social/job situations. We have found it critical for teachers to concern themselves with their students' socioemotional development as part of the ongoing program. The teacher/counselor may not be an alternative approach, but rather the only approach to working with the severely handicapped/hearing-impaired adolescent. (p. 26)

Special projects offer promising practices.

Approaches to meeting the needs of severely disabled school age children with hearing impairments are offered by the Multiply Handicapped Education Project at the Speech Pathology and Audiology (SPA) Program of The Pennsylvania State University. Principal project goals include the identification of children in the service area who are hearing impaired and have one or more other severe handicaps; and the provision of adequate intellectual and psychosocial evaluations for all children in the demonstration classroom and a limited number of other environments.

Important aspects of the project include development of a service delivery model for a rural population of multiply handicapped hearing impaired children; the Child-Based Information System, in which a bank of strategies and a detailed record of goals and accomplishments aid teachers in planning and conducting a multiply handicapped child's educational program; involvement of parents, with an extension of classroom educational programs into the home, and an effort to help parents better understand and cope with their handicapped child (Program Development Assistance System, 1980).

Cerebral Palsy

Classification decisions are complex.

Cerebral palsy (CP) comprises a variety of syndromes, most of which include multiple disabilities (see Chapter 9 for definition). Common difficulties are paralysis, mental retardation, epilepsy, vision and hearing impairments, and speech problems. One wonders, in view of the variety of disabilities, how decisions are ever made about classification. Why is a child who has both vision problems and CP not classified as blind? This question leads to the concept of *primary* handicap. The term cerebral palsy is used only for cases of multiple disability in which the neuromotor disability is *primary* or *outstanding,* the major factor in designing the pupil's mix of special and regular education. When limitations in cognitive functioning are also prominent, the person may be considered to be profoundly or severely handicapped as defined by educators, and not classed primarily as CP.

The Children's Rehabilitation Center of the University of Virginia provides a program to train service providers of southwestern Virginia who work with cerebral palsied children. The project has a demonstration classroom for the physically handicapped, which is located in a rural elementary school. Neurodevelopmental therapy techniques are the project's philosophical base. Target developmental areas are ambulation, feeding and speech, nonverbal communication systems, and improving functional usage of the limbs.

The program has a strong interest in parent training and in mainstreaming the handicapped. Weekly groups are held to integrate physically handicapped preschoolers and nonhandicapped children in parent-led sessions. These sessions serve to expand upon the model classroom and adapted model sites for the multihandicapped (Program Development Assistance System, 1980).

Autism[2]

Programming for autistic children stresses communication skills.

Autistic and autistic-like children relate very poorly to other people, lack communication skills, often exhibit stereotyped behavior, and usually prefer an unchanging environment. Autistic children frequently are very difficult to diagnose; not infrequently they are considered to be mentally retarded in early life. School programs for them emphasize intensive interpersonal interactions to encourage trusting relationships and the general development of responsive behavior; other commonly emphasized curriculum targets are language, self-care, and preacademic skill development. With increasing frequency the children who first appear to be SPI and then emerge as autistic make progress and are introduced into mainstream school environments with strong supportive programs. Principles of applied behavior analysis are commonly used in programs for these children. Parents usually participate intensively in their children's programs.

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[2] See Chapter 9 for definition. Autism is included in the category of "other health impairments" for purposes of Public Law 94-142. In the context of instructional planning, however, it is most usefully described as a severe/profound impairment. A particular manifestation of autistic behavior sometimes mistaken for giftedness is noted in Chapter 6 (p. 193).

Project Educate, initiated by the Indiana University Developmental Training Center, is an example of one such program. The primary aim of Project Educate has been to develop a model school program for autistic and severely emotionally handicapped children and their parents which can be successfully implemented by the public schools in Indiana. Children throughout the state are screened for the program. At the case conference, parents and schools agree to train with the project staff to facilitate the child's placement back in the local educational agency and home. An interdisciplinary staff works with the clients in the elementary school based classrooms, in communities, and in the home programs to insure generalization of learning and work towards gaining as much independence in functioning as possible (Program Development Assistance System, 1980).

Staff support helps to solidify gains.

From Institutions to Community Based Programming

The first residential institution for mentally retarded[3] persons in the United States was opened in 1848 in Massachusetts. By 1970, 680 such private and public facilities were in operation. To start with, they all had a clear and definite educational purpose: to prepare mentally retarded children and youth

*Who Needs Friends Like This?**

"Left to his own resources, even in a grocery store, the profoundly retarded person dies within a matter of days of starvation, if he does not meet with accidental death before that.... It is 'heroic optimism' to think that with proper habilitation, the level of functioning of every retarded person may be improved.... The court's belief that virtually all the retarded people in institutions could be 'normalized' in 'less restrictive settings' is ... divorced from reality.... The personal life of the retarded person [in a community living situation] is reduced to more and more frustration and isolation." (p. 1)

An Argument in Response (in part)

"All individuals could be trained to 'survive' in grocery stores and a variety of other community environments if they had regular access and reason to use those environments." (p. 2)

**These statements were part of a brief filed in the* Haldeman *v.* Pennhurst *case as quoted in the* Newsletter *of The Association for the Severely Handicapped, 1981, 7(1).*

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[3] The review of programs for the severely mentally retarded is considered relevant to the discussion of severe and profound impairments because severe functional mental retardation is the central defining characteristic of SPI. It is also true that most severely retarded persons also show one or more other impairments.

for return to the community as self-sustaining and contributing citizens. That objective has never been entirely lost. Yet there were long cloudy periods for persons in residential schools during the years following their inception. The positive motives that undergirded the early residential school movement were sometimes overshadowed by living conditions that, at best, offered sterile warehousing for the residents and, at worst, actual abuse.

Due largely to the vigilant attention and diligent work of organizations like the National Association of Retarded Citizens (NARC) and a number of concerned professionals, the situation now appears to be improving. Residential centers offer exciting and challenging opportunities for principals and regular and special teachers to work with SPI children and youth (Blatt & Kaplan, 1967; Dunn, 1968, 1973; Kirk, 1972; Kugel & Wolfensberger, 1969).

Individuals living in residential schools often have "lost their places" in their home communities simply by being away. Because they were not in the communities and visible while they were growing up, no accommodation was planned for them. Parents moved away or died, marriages dissolved, and the family maintained little communication with the institution. Brothers and sisters matured without fully realizing that waiting in their future was the return to the community of a sibling they hardly knew. At the same time, leaving the familiar and relatively sheltered institution was often traumatic for retarded persons. They did not fully understand the transition process which, often, was not adequately arranged and staffed.

Recently, the goal of return to the community has been revived and acted on. The process has developed both in and out of the schools' area of responsibility because some children and youth of school age are moving out of institutions, as are many persons beyond school age.

Community living arrangements open new professional opportunities.

The transition from residential living, with its ever-present umbrella of comprehensive custodial care, to community life is recognized as a major learning task for those retarded persons making the move. It is natural to turn to teachers to analyze the task components; organize them into groups and sequences which learners can more readily assimilate; set up real life situations or simulations in which to conduct, monitor, and individualize the needed instruction; establish maintenance routines for what has been learned; and judge when the learners have satisfied the criteria of competence for the skills that make up successful transitions.

When actual kin are unknown or unreceptive to the movement from residential home to community, two forms of community adjustment can facilitate the transition: foster homes and group community residences.

Foster homes are used more often for children and youth who have not reached their majority. They are taken in by families who agree to treat them as family members; encourage their socialization; give them schooling, emotional, personal, and social support; and in all appropriate ways foster their development. (The foster home approach is also being used with some success with elderly retarded persons who find it a more fulfilling way of life than remaining at the institution. The family-centered life objective is the same as for the young people, but the elderly are less often expected to move on to independent community living.)

The group community residence literally aims to move a number of well tested residential concepts from the institution into the heart of the community. It has been difficult in some instances to do so, either actually or figuratively. There is often determined resistance from home owners to having a group of 8 to 15 handicapped young adults move into their neighborhoods, in either a newly constructed group residence or one remodeled from one or more large existing houses.

Community understanding is both essential and difficult to achieve.

The group community residence operates somewhat like a cottage unit in an institution. Resident coordinators (like cottage parents), sometimes a married couple, manage the facility and provide opportunities for the residents to acquire home and community living skills leading to increased independence. These skills include clothing purchase and care, preparing meals, house cleaning, money management, use of recreation facilities, religious activities, attending to personal physical and medical needs, adding to literacy and job skills, voting, and the like. The staff has access to paid professional consultants and supervisors and can call them in to assist individual residents. It is common for the residents to be employed initially in diagnostic and skill-building workshops, and then guided into regular employment, if possible.

Technology, Special Procedures, and Preferred Practices

Prosthetic devices exist to help disabled persons with almost every aspect of their lives. A prosthetic device, in a very broad sense, is used to modify the functioning of the disabled person or to modify the environment in such a way that it eradicates or reduces the effects of a disability. Smith and Neisworth (1975) specified five general categories of such devices: locomotion, life support, grooming and hygiene, communication, and household assistance. A few examples of prosthetic devices follow.

Everybody uses prosthetic devices.

For SPI persons who have communication problems, simple electronic communication boards can be constructed to signal common needs (e.g., to use the bathroom, mobility help) or to give simple responses (e.g., "yes," "no," or "I don't know"). The user may be required to make only one simple motion to activate one of a number of widely spaced push buttons.

More complex communication boards exist or can be created. Some devices call for a teacher or other nonhandicapped person to scan a sequence of possible responses; at the proper moment the handicapped person gives a signal, however slight, such as an eye blink or touching a switch. From the signal the teacher can determine the response intended by the handicapped person. The Bliss Symbol Scanner (Prentke Romich Co., Shreve, Ohio) is a

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Everybody Uses Assistance Devices

Babies need strollers; hikers need backpacks. Specially adapted devices are everywhere you look—glass elevators to revolving tower restaurants, for example—how specially adapted can you get? (Corcoran, 1980, p. 1)

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widely used scanning board that presents a variety of images and symbols which many SPI children use to communicate with their teachers, classmates, and aides.

Wheelchairs of many varieties are in use; some have mirrors, allowing SPI children to signal by eye movements to the drivers of the wheelchair the directions they wish to travel. Eye movement signals can also be used with countless other prosthetic devices relating to communication and mobility.

The rapid invention of prosthetic devices by technicians and the co-invention of devices by the joint efforts of handicapped persons and engineers has been one of the most encouraging developments in programming for SPI persons. It is hard to imagine the limits of technical aids at a time when talent of the highest order is coming to the field.

Methods of behavior analysis have become prominent.

The systematic application of the methods of behavior analysis to the teaching of SPI persons probably has been the major breakthrough in education in recent decades. Through behavioral methods, individuals considered to be hopelessly handicapped have been taught complex chains of behavior that add richness to their lives and to those of their families and associates. Again, it is difficult to set the limits of this technology, which is a contributing factor to the greater optimism often expressed about the developmental potentialities of SPI children.

No other aspect of special education is changing quite so rapidly as that of services to SPI children. Elements listed here as "preferred" are rapidly becoming prevailing practices.

Prevailing Practices	**Preferred Practices**
1. Screening and preventive programs for SPI children are available only to a minority of the population.	1. Screening programs (e.g., for metabolic disorders) and preventive programs (e.g., early care for "at risk" children) are provided uniformly to the entire population of children.
2. SPI children attend centralized or regional special schools.	2. SPI children, in small clusters, attend regular schools and interact with nonhandicapped children in as many ways as are feasible, including helping relationships.
3. Programming in institutional settings is oriented to long-term care.	3. Programming in institutional settings is oriented maximally to helping residents to return to their families and communities and to the fullest possible measure of independent living.
4. Public policy and funding arrangements for community facilities to	4. Careful study and policy development lead to long-term, stable

Prevailing Practices	Preferred Practices
serve SPI children are inconsistent and inadequate.	development of community based services for SPI persons.
5. It is assumed that SPI children cannot learn academic skills, and the school curriculum is oriented to other matters, such as self-care and leisure skills.	5. Curriculum planning for SPI children is an individual matter and does not preclude academic training; preparation for employment or other form of economic usefulness is common.
6. It is assumed that SPI persons will live, as adults, in sheltered environments.	6. SPI students are prepared as fully as possible for independent, adult living arrangements.

The Role of the Regular Class Teacher

Regular class teachers ordinarily do not find services to SPI children to be overly burdensome. There are not many such children, and those who attend regular schools (an increasing number, to be sure), are usually well supported by special education teachers and other specialists. Following is a brief list of some of the challenges which regular teachers may face, along with guidelines for meeting them.

Specialists provide extensive support.

1. Regular teachers may be expected to support the enrollment of SPI children in the least restrictive environment, which often means regular schools.
2. Regular teachers should expect to be informed, at least at a basic level, of the nature of the disabilities and handicaps of SPI children, and they should expect to help *all* children to become aware of such conditions and to learn positive attitudes toward SPI children.
3. If SPI children are enrolled directly in regular classrooms, teachers should expect to consult with special education staff members and parents concerning the nature of the programs which should be provided, and to participate fully in the evaluation of the children's progress and their impact on the regular class as a whole.
4. The regular classroom teacher who participates directly in programs for SPI children should expect to receive such training, assistance, and additional equipment and supplies as are needed to conduct a high quality program for all children in the classroom.

Characteristics of a Comprehensive Program

In brief fashion, the following list summarizes the characteristics of a full and adequate community program for severely and profoundly impaired children.

1. Parents of SPI children are contacted by school authorities as soon as a handicapping condition is discovered. The school's interest in the child is expressed, contacts are continued, and the child is enrolled in appropriate school programs as soon as feasible. Parent education is offered from the moment of discovery.
2. School authorities develop clear patterns of communication and coordination with all health, rehabilitation, and social service agencies in the community for the purpose of coordinating services to the SPI children and their families.

All community services are effectively coordinated.

3. All SPI children are enrolled in regular schools, at least for an initial period of schooling, and a place is held in a regular school for each SPI child, even when the child is enrolled in a special center or school for a period of time.
4. All children and all parents in the community are informed about SPI children, and many are engaged in helping to conduct the school programs; nonhandicapped children may serve as peer tutors, for example, and parents often act as aides or assistants.
5. Preparation programs for teachers of SPI children are significant parts of university programs serving the area schools. Specialized teachers from such programs are employed, as are all necessary additional staff, such as speech-language therapists, psychologists, social workers, and school nurses.
6. All teachers are given training to help them develop awareness and skills so that they can take an important part in programming for SPI children in the regular schools.
7. Comprehensive diagnostic services are provided by the schools, including the following elements: educational, psychological, social, and medical (arranged outside of the school).
8. Intensive programs in parent education and counseling are available through the schools and related agencies.

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CHAPTER 14

Facing the Future

Chapter Outline

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  Early Childhood Education
  Child Neglect and Abuse
  Drug Handicapped Learners
  School Age Parents

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Overview

This last chapter is the most speculative part of the book, especially its final section that deals with emerging matters. The programs and problems in the first two sections of the chapter are actually now present for everyone to see. They include the growing pains of early childhood education, impediments to good service delivery in locations with serious internal problems, and funding systems that often inhibit what they set out to help.

The subject of emerging issues later in the chapter, however, especially the future of education for exceptional students, is written from a perspective with which other educators may not agree. We see important shifts in our society in its attitudes toward atypical individuals, in the legal framework for special education programs, and in performance expectations for teachers, principals, and other educators. Change is going on in communities and schools at a very rapid pace. Old certainties, and even some that are less old, are being challenged. It seems clear to us that in the United States the political, economic, and philosophical trends of the 1980's have raised urgent new concerns.

Emerging Programs

As a people, we have long been concerned with the physical welfare of children and youth. That concern now extends to psychosocial development, career development, and opportunities for better lives. Programs are being developed for young people who have, until now, been on the fringes of society: high-risk preschool children, drug-handicapped learners, school age parents, and neglected and abused children. A fundamental element in all of these programs is mainstreaming; its principles are part of a much broader concept of child education than simply the class in which the child is enrolled.

Early Childhood Education

Historical Background

Teachers heard little about early childhood education until the 1960's. During that decade public awareness of the importance of early education was heightened as a result of Head Start and similar programs which focused on 3, 4, and 5 year old children, especially those who were members of economically poor families, physiologically handicapped, or both (Zigler & Valentine, 1979). By the 1970's, interest in early childhood education reached its present height. A new rationale was among those factors responsible.

An important change in rationale for early education has occurred.

Early childhood instruction for exceptional children during the 1950's and 1960's had a pragmatic base. It just seemed to "make sense" to start earlier to educate children who were blind or deaf or had such congenital crippling conditions as cerebral palsy. For children with emotional problems, nursery school was usually prescribed, mainly to relieve a troubled home situation or to provide a therapeutic setting for long stretches of time.

Kindergarten, as an educational experience, grew in general acceptance during the 1950's and 1960's, but attendance was not yet universal. It was considered a potentially helpful although not necessary transition from home to school.

Only a few years ago children who needed help in eating or toileting were excluded from school.

The midcentury pragmatic approach was inconsistent, however. Some exceptional children were denied early education on the grounds that they were not mature enough to profit from the experience; they required dressing, toileting, and other physical care that was generally not supplied in preschools. Whether a child might be able to gain intellectually or socially from the preschool curriculum was seldom considered.

The new rationale for early education gained widespread attention during the 1960's and 1970's. It posited that (a) educability itself could be furthered through properly planned early experiences; and (b) economically and socially disadvantaged and other handicapped children could, in particular, be aided by such experiences. By the middle 1970's, that rationale was supported by strong if not unanimous and conclusive evidence. Within the same period, other arguments began to emerge: (a) properly planned early experiences might well be valuable for the personal, social, and intellectual development of all 3 to 6 year olds; and (b) it might be well, in fact, to start educational efforts at birth or shortly after for all children. The context for these proposals was the feasibility of working with and through parents to further children's development in homes as well as in day care centers, nurseries, and kindergartens.

Early Childhood Intervention

Preschool enrollment is steadily increasing.

In 1965 fewer than 30% of all children attended preschool. By 1978, 50% of the nation's children were in preschool programs. With the birth rate now expected to rise during the 1980's, and with more mothers getting paying jobs, preschool enrollment will approach 7 million by 1989, according to the National Center for Education Statistics.

The recent surge of interest in infancy and the early childhood years holds high promise for improving the lives of exceptional children. The central thrust of the movement is to ensure that children get off to a good start. Under the guidance of specialists, parents begin educational procedures with infants and toddlers in the home. The purpose of this earliest form of intervention is threefold: to help babies and their families to live fuller and happier lives together from the outset; to prevent or minimize the development of problems that are rooted in the first three or four years of life; and to increase the chances for satisfactory future schooling and wholesome life patterns.

The Brookline Early Education Project (BEEP)

The Brookline project exemplifies the potential to create guidelines for very early childhood educational intervention strategies and tactics. BEEP's purposes are as follows:

> The aim of the BEEP educational program is to help each child experience the best possible beginning in life by providing resources for the parents in their roles as teachers of the young child. The intention is to increase parental understanding of child development and to focus on the design of home conditions that encourage the child's emerging abilities.
>
> BEEP does not seek to accelerate or force children's development. Instead, its educational philosophy is oriented toward assisting the family in arranging for each child an environment rich in resources and in opportunities for . . . exercise . . . of natural talents. (Pierson, 1974, p. 33)

Early education programs are a resource for parents.

Initiated in 1973, BEEP sought to improve the quality of early education and to reduce educational handicaps. From the beginning, links were established and maintained with physicians concerned with prevention, early detection, and management of medical problems in young children. Initially, the program enrolled 225 families in which a birth was anticipated. Parent participation started a few months before the birth and continued through the beginning of conventional schooling. The project included Black and Spanish-speaking families. Participation was voluntary. The only criteria for enrollment were that the parents expected a baby and had no definite plans to move from the area within a 5 year period.

Even small deviations in development deserve attention in the first years of life.

Activities started immediately with information and guidance for parents based on their questions. Two weeks after birth each baby was examined at a neighborhood Brookline Early Education Project (BEEP) center. A psychologist, public health nurse, and pediatrician assessed the child's development and searched for signs that might presage educational handicaps. At this early stage, any departure from the normal range of infant behavior, whether social, sensory, or motor, received attention. Except for major conditions like deafness, blindness, and overt bodily anomalies, it was not feasible to attempt to separate medical from potential educational problems. Aberrations in development were alarm signals for educators and physicians alike.

Infants were subsequently examined at 3½, 6½, 11, 14½, 24, and 50 months of age. The usual pediatric examination was supplemented by neurologic, physical, and mental assessments. Anything suspicious was followed up in further study by specialists. For example, if speech appeared to be delayed, if there was uncertainty about adequate hearing or vision, or if the child did not relate to others appropriately, special educators, audiologists, or other professionals were brought in for educational diagnoses until (a) the basis of the problem seemed clear and (b) an educational corrective or ameliorative program was established. Naturally, each examination and staff review enriched understanding of the individual child.

Teachers discussed with parents the particular patterns of their children's development. They helped parents comprehend and adjust to a child's developmental spurts and lags—to encourage the spurts, to respect the lags, and to assist the child in overcoming the latter. They also helped parents maintain equanimity in the face of temporary periods of unusual behavior.

More and more, as behavior differentiated, educational programs were implemented. They emphasized social behavior, self-help behavior (e.g., dressing or eating), language understanding and production, visual and auditory perception, personal control, and other combinations of motor, affective, and cognitive learning.

Some principles of early education are well established.

BEEP is not an experiment. Rather, it demonstrates that the evidence accumulated by earlier investigations (e.g., Hunt, 1961; Schaefer, 1972) can be applied beneficially. Moreover, it is trying to learn the levels of intensity at which principles must be applied to achieve acceptable results and costs.

The Tucson Program

The school's interest is expressed to mothers on the first day after childbirth.

Other communities have taken different routes to attain similar goals. In Tucson, Arizona, for instance, after a child has been delivered in a city hospital, the mother receives on her first meal tray a small booklet containing a greeting from the board of education to the parents and child and a welcome to the prospective new pupil. The booklet points out that the baby's intellectual, social, and emotional development are as important as health and physical development. Parents are urged to work closely with their physician to ensure the latter and with the schools to maximize the former. A telephone number is given for parents to call if they have questions or concerns. They are also told that someone from the schools will make a personal visit about two weeks after the mother and child return home if the parents have not initiated a contact in the meantime.

The initial interaction leads, if the parent wishes, to periodic home visits by a trained aide, one of several who give help and guidance to parents under the supervision of a professional teacher. The staff also conducts informal discussions with three or four neighborhood mothers, usually in the kitchen or living room of a home, while an aide and/or older family member takes care of the babies.

Communication barriers are bridged.

The program is conducted in English, Spanish, and the Indian languages common to the Tucson region, so all parents are served. If the parents are unable to read or belong to an Indian tribe whose language does not have a well established written form, the initial contact is made through direct conversation rather than print. More important, efforts to make initial contacts extend beyond hospitals to children who are born at home. Teachers and aides are constantly challenged by differences in customs, languages, literacy, cultures, and family lifestyles, in addition to the usual professional and paraprofessional concerns. They themselves usually come from different backgrounds. The key factor in the program's success is teamwork.

The Tucson program offers early childhood curriculum materials and a lending library for parents. Specialists are called in for consultations. Family activities similar to those described for BEEP are also conducted. The main differences between the Tucson and BEEP programs lie in the contact procedure, the adaptations to the setting and population, the use of homes for meetings, and the substantial use of trained aides under supervision.

Project Home Base

One of several "nationally validated"[1] early education projects was developed at Yakima, Washington. Project Home Base was originally conducted under Title III of the Elementary and Secondary Education Act of 1965. After it showed success the project was submitted for national review, approved, and given funds for dissemination to other communities under the auspices of the National Diffusion Network of the U.S. Department of Education. The following description is adapted from an abstract submitted by Mrs. Carol Jackson, Project Director:

□Project Home Base is founded on the belief that parents are a child's first and best continuous teachers. It is aimed at supporting and enhancing the parents' teaching/parenting behavior and thereby influencing development of the child's growth/learning potential. The central feature of the project is a weekly home visit by a paraprofessional parent educator. The parents are given a task selected to meet the developmental needs of the child, and are provided with information about child growth and development, health care, and related matters. The parents then work with their child on the selected task during the week. As a result of these contacts, it is hoped that the parents will be better able to identify and meet their child's developmental needs, thus positively affecting growth/learning potential. The child will be better prepared to learn and will become a more efficient and effective learner.

"Parents are a child's first teachers."

Evaluation results show that the principal project objectives have been met consistently. Home Base children entering Head Start performed better on a preschool inventory than non-Home Base children, and they completed 92.5% of the tasks taught them by parents. Home Base parents increased their use of desirable teaching behaviors, as measured by a locally constructed Directed Observation Instrument. Desirable teaching behaviors for parents were described as follows (Project Home Base, 1977):

1. Explain what is going to happen before you start.
   If children have an idea of what is expected before they start . . . they learn to think about what they will be doing.
2. Give time to look at the materials before starting work.
   If children become familiar with the materials first . . . they learn to become organized and better prepared to do the task.
3. Ask questions that require more than one right answer.
   If children see more than one point of view . . . they learn to be open to ideas.
4. Ask questions that require more than one or two words to answer.
   If children learn to give more than a "yes" or "no" answer . . . they learn to think their answers through.

Specific teaching skills can be strengthened.

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[1] This project was reviewed by the Joint Dissemination and Review Panel (JDRP) of the U.S. Department of Education. See the annual publication *Educational Programs That Work*, published by the Far West Laboratory for Educational Research and Development, San Francisco, for abstracts of projects approved through the JDRP process and included in the diffusion program of the National Diffusion Network, also sponsored by the U.S. Department of Education.

5. Get children to talk about their answers.
   If children talk about their answers . . . they learn to think more deeply about things.
6. Get children to ask questions.
   If you encourage children to ask questions . . . they learn to look for answers.
7. Give time to think about a problem.
   If children are given time to think . . . they learn to think for themselves.
8. Get children to back up answers with facts and evidence.
   If children can explain how they got an answer . . . they have learned to find the correct answer without guessing.
9. Praise children when they do well, or when they take small steps in the right direction.
   If children hear from you how well they are doing . . . they learn to feel good about themselves.
10. Let children know when their answers are wrong, but do it in a loving way.
    If children see the difference between right and wrong . . . they learn to keep working until they find the correct answer. ☐

The "Saturday School" Program

Excellence need not be expensive.

A unique program in which exceptional children make their school start in the context of mainstreamed early childhood offerings is conducted by the Ferguson-Florissant School District in Missouri. High effectiveness coupled with low cost characterizes this operation, which starts with 4 year olds. It is a home-school arrangement that draws 700 pupils annually (75% of the target population) at a yearly per pupil cost of $230.

Children go to school three hours on Saturday morning or afternoon. On prearranged schedules, mothers and fathers are totally involved as parent-teachers, planners, and aides, all under professional guidance. Preschool teachers meet on weekdays in different homes with three or four neighborhood children. Parents and siblings are encouraged to join in.

Close to 15% of the 4 year olds in the program receive special education and related services. Precipitating conditions range from minor lags in motor skill to major coordination, language, and behavior problems. All handicapped pupils are mainstreamed in the regular Saturday classes. Teachers also spend time in each handicapped pupil's home showing parents how to apply activities specifically designed to match the child's needs.

Long-term effects were measured.

The original participants in the Saturday School program had reached grade 4 in 1977. In every grade along the way they scored higher on standardized achievement tests than students with other preschool experience, and significantly higher than classmates with no preschool preparation. When the progress of handicapped children who needed special attention was checked the following results were found:

1. The majority were functioning well by the end of the Saturday School year.
2. Of those with learning disabilities, 85% retested at age level by the end of the first year.

"Who is For Children?"

- *By 1990, there will be an estimated 24.3 million preschool children in the United States, an increase from 1979 of 36%. At least 10.5 million of these children will have mothers in the labor force—a 63% increase since 1979.*
- *At least half a million children in this country live in out-of-home care, and may well grow up there.*

(From a 1980 address to the American Psychological Association by Marian Wright Edelman; see Edelman, 1981.)

Evidence about gains is positive

3. Children with emotional problems evidenced marked improvement in behavior and adjustment.
4. Seven out of eight of the children whose test scores were initially in the retarded range moved out of that range.
5. Former Saturday School students with diagnosed learning disabilities improved more each year than did classmates without preschool training.

Head Start Mainstreaming

Mainstreaming in Head Start reaped benefits for all children.

The Head Start program has become an important source of information about the mainstreaming of handicapped children. In 1972, amendments to the Head Start law stipulated that at least 10% of the children enrolled should be handicapped. The intent was to give handicapped and nonhandicapped children a chance to live and learn together (Zigler & Valentine, 1979).

Klein (1977) summarized the Head Start experience in mainstreaming as follows:

> Observations of early childhood programs indicate that even the most severely impaired children can benefit from integrated preschool programs. Head Start staff members who have worked with handicapped children as part of their regular program believe firmly that mainstreaming is beneficial to both handicapped and normal children. Parents of both nonhandicapped and handicapped children have expressed very positive attitudes toward Head Start in general, and particularly toward efforts on behalf of the handicapped. Most parents of disabled children in Head Start report that the program has had a significant impact on their children. These observations reinforce the belief that handicapped children should not be isolated. Mainstreaming is difficult, but its impact can reach far beyond the child and the immediate situation.
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> Handicapped individuals have become increasingly vocal in the past few years. They are cognizant of their rights to education, employment, information, and all the other things associated with a full and useful life. Whether these rights are attained and how they are used are dependent on the motivation, goals, and abilities of the individuals concerned—all factors that are influenced by early experiences. The formative years may determine whether individuals are boxed in by the things they cannot do or whether they focus on the things they can do. Reaching out requires a kind of realism that is nurtured in the world of the nonhandicapped where the individual has the opportunity to know and observe many people without visible disabilities.

> If handicapped persons have the right to share the world of the normal, we as educators have a responsibility. We are obligated to try to help children develop the outlook and skills which may enable them to function effectively in spite of a handicap. What better place to start than in a preschool group? (p. 9)

Special Group Programs

Other early education programs are commonly conducted by health or welfare agencies as well as by schools. Many are comprehensive in service but may be limited to certain categories of children (e.g., blind or deaf) or families (e.g., income limitations). Such programs sometimes serve families on a broad citywide, county, or regional basis.

Outlook for Early Education

The outlook is favorable, but progress may be slow.

Available evidence points strongly and consistently to the advantages of early education, especially for "high risk" and handicapped children. Unfortunately, the American commitment to early education is still precarious. Most communities that started preschool programs for handicapped children are continuing to provide them (Swan, 1980). But early education programs are still the exception, not the rule. No more than one-fourth of the children who could profit from Head Start stimulation are enrolled in such programs (Edelman, 1981).

The outlook for the future of early education is promising. Many opportunities are appearing for persons prepared as early childhood teachers or administrators. When free, public education becomes available to all America's infants and toddlers, the following five outcomes can be anticipated:

- Many children who may need special education because of giftedness, talents, sensory defects, motor problems, emotional problems, slowed cognitive development, speech anomalies, or any other reason will be identified early.
- Early identification will permit equally early intervention to do what is needed about existing atypical conditions and to provide the best start for each child's education, self-concept, and future life.
- Early identification and intervention should result in a lower cost-effectiveness ratio in special education programs. In other words, effective special education should be less costly per child because it is applied earlier when the situation is more amenable to change. Needs for later special education should be eliminated in many cases.

Later, more costly intervention can be avoided.

- Parents will be spared the concerns and anguish that tend to mount as they see their exceptional children grow older without adequate attention, and parental commitment to effective schooling for their children should be increased.
- A higher state of mental health should be found in exceptional children and in their siblings and peers. Positive stimulation and continuing special education in the early years will become a familiar part of life by the time

attitudes and understandings are formed. A corresponding reduction in antisocial behavior should be observed also.

Some research shows a 50% reduction in needs for special education.

Exactly these kinds of results are being reported in long-range outcome studies of early education programs (e.g., Lazar, 1981; Schweinhart & Weikart, 1980). One followup study (to age 15) of children who had been enrolled in the highly structured preschool program of the High Scope Educational Research Foundation showed a 50% reduction in the need for special education service through the end of high school (Schweinhart & Weikart, 1980).

Program Expectations and Outcomes

Early education programs can be expected to produce the following results:

1. More teaching positions will be available in the early childhood range as state educational policies show increased concern for and added acceptance of responsibility for the early years of life.
2. Teachers working in early education settings today will be establishing the prototypes for those cities, towns, and rural areas that plan to start programs.
3. A shift in public school resource allocations toward the early years can be anticipated.
4. New curricula will be developed, particularly for the very early years, that are more than simply a downward extension of present preprimary and primary curricula.
5. Encouragement will be given to certain curricular position shifts now partly underway. Examples include teaching conversational competence in foreign languages, and teaching skills such as swimming in the very early childhood years instead of in secondary schools.
6. The health, social welfare, and education professions will be drawn even closer to share responsibilities, along with parents, for the overall management of the developing child.
7. Community and state agencies and the education, health, and social welfare professions will increase investment in reducing problem occurrence through a variety of early interventions.
8. The training of educators will be extended to stress more substantive knowledge and understanding of the earliest years for all professional teachers.
9. Scheduled educational services for young children will relate more to their needs and to the time schedules of their parents than to present nursery and kindergarten schedules.
10. The expected national growth in number of child care centers for working parents will be accompanied by an increased demand for educational programs in all such centers, so that they become more than physically safe parking lots for babies. The result will be a sharp upsurge in the demand for qualified professionals to operate the educational com-

Innovative curricula will be developed.

ponents of such centers, with special consideration for exceptional child needs.

11. Experiences with the early education of children may lead to major changes in the substance and sequencing of curriculum content and skills instruction in elementary and secondary schools.

Child Neglect and Abuse

The Challenge

The following case history is drawn from an actual account. It has been fictionalized to disguise location and persons, but the reported facts have not been altered.

☐Eastburg, South Columbia. The parents of a 9 year old Venida Township boy who died of pneumonia last month in a padlocked bedroom in his home have been arrested on charges relating to the death.

Lewis and Helen G_____, of 4625 Fifth Avenue in the Bolton Heights section of the township, were arrested Friday night and charged with aggravated assault, recklessly endangering another person, simple assault, and endangering the welfare of children.

They were arraigned by Magistrate Edgar Kirk in Venida Township. He set bond at $25,000 each and scheduled a hearing for Wednesday.

Police said Lewis G_____'s bond was posted by a friend and he was released, but his wife is still in County Jail.

Earlier reports were on record.

The death of the boy, Lewis Jr., brought expressions of disgust from outraged neighbors. Two reports of child abuse against the parents had been filed earlier with Child Welfare Services.

Lamont Carpenter, Venida Township police chief, said his office received numerous calls from people claiming the boy had been abused and beaten. The phone calls, the condition of the body, and knowledge of past child abuse cases against the parents prompted Carpenter to ask county detectives to investigate.

Police were notified by the boy's grandmother, who lives near the G_____'s residence, at about 11 a.m., November 11.

The boy, who was found lying face up on his bedroom floor, was pronounced dead at the scene by a doctor at 11:15 a.m. The coroner's report noted that the body showed bruises and abrasions.

When the police arrived at the home to take reports they noted that the father at first refused to get out of bed to give them any information. They also noted in their report that while they were in the upstairs bedroom with the body the mother was downstairs watching television.

A special investigator for the coroner's office, Ramon Gomez, said the boy's room was without a light fixture and was padlocked from the outside. Gomez said there were no toys in the room, no sheets on the bed, and an empty dresser. The windows were nailed shut.

An investigation revealed that on February 15, 19___, the boy, who was 2 years old at the time, was treated at Standish Mountain Hospital for three fractured ribs and bruises. X-rays showed the fractures were in the healing stage.

Five days later a doctor at the hospital filed a child abuse report with Child Welfare Services. The report noted the boy's "over-all weakness and malnutrition." When questioned by the doctor the parents denied any knowledge of the abuse, police said.

A second child abuse report was filed against the parents with Child Welfare Services on April 8, 19___, when the boy was 3. This time the report came from St. James' Hospital, where the boy had been taken for treatment of an eye injury.

The boy was admitted with abrasions of the forehead and right side of the face. A more thorough report revealed he had "slow motor growth development and was in a state of depression."

Doctors removed a cataract from the boy's injured eye and on April 30, he was discharged and taken to Suiza Shelter in Mulvahill Township. The report also noted that he had not yet learned to walk.

Child Welfare Services had intervened once before.

A month later Lewis Jr. was transferred to another Child Welfare Services facility in Portford and in September, 19___, he was released to foster parents on a temporary custody basis.

Twenty-three months later, on August 28, 19___, he was returned to his natural parents by Child Welfare Services. Case workers reportedly made periodic checks on the G_____'s for the following nine months, and then apparently stopped.

One detective investigating the case said, "The boy was taken from the foster parents and sent to hell, where he remained until he died."

Abuse and neglect took their inevitable toll.

Gomez said the boy's father told police the youth was acting up at the dinner table the night before he died. The father reportedly got up from the table, punched his son, threw him against the wall and beat him with a board.

The father told police he ordered the boy to his room and later that night said he heard the youngster coughing and gasping for air. The father told police he did not go into the room to check on the boy.

The mother, in a statement to police, said her son had been suffering from a cold and had a fever. The day before he died she gave him two cold water baths in an attempt to lower the fever. Police said a doctor had not been called to treat the boy's cold.

Two days after the boy died, Child Welfare Services, with court permission, went to the G_____'s residence and took away two daughters who were living in the home. There were no reports of the girls being abused, police said. □

The actions in this story are repeated more than 800 times every day in the United States. It has been estimated that 50,000 children die from child abuse each year and 250,000 more are abused and live. It is not always easy to detect the difference between abuse and neglect.

> Not far from the hospital room of her grossly neglected two-month-old infant, Sherry (fictitious name)—a 16-year-old mother—is convalescing from an attempted suicide. The attempt was, in part, triggered by Sherry's separation from her baby, ordered by court and hospital authorities in the District of Columbia.
>
> In the fall of 1973, the infant was brought to the hospital and was diagnosed as suffering from severe diaper rash. The young mother had aggravated the rash by bathing it with an acid solution which caused burns on the baby's skin. In terms of height and weight, the baby was underdeveloped. Her eyes had been washed with milk and she had been fed solid foods. Bruises were also found which indicated physical abuse such as hitting and slapping. A "medical hold" was placed on the infant and court action was scheduled for January, 1974. Following this, the young mother attempted suicide.
>
> Later, in working with Sherry, doctors found her to be very intelligent. (She had been an "A" student while in school.) They also learned that the pregnancy was unplanned and unwanted and that Sherry had been abandoned by the baby's father three weeks before her scheduled delivery. She also revealed that her own mother had beaten her when she was a child.
>
> Doctors in the case were initially reluctant to characterize Sherry's treatment of her baby as intentional abuse. Most of the damaging practices described seem to be the result of ignorance. The young woman apparently did not know appropriate child care techniques and did not understand the extreme vulnerability of her child. (Dell'Amore, 1974, p. 3)

Ignorance about child rearing can have disastrous effects.

National concern for neglected and abused children has mounted in recent years. The Kempe (1973) report, showing that more than 60,000 children were seriously abused in the United States in 1972, has alerted many professionals and the general public to this apparently growing problem. A report by Nagi (1975) suggested that the problem may even be 10 times larger. Yet the phenomenon is far from recent. It is a sign of an advance in civilization that our sensitivity to the problem is heightened and that efforts are growing to face and combat it. Abandoning unwanted children was once common in many cultures (Hurt, 1975), but interest in child advocacy has grown to the point where society recognizes that children have rights of their own and that they should be removed from homes in which they are maltreated.

Reluctance to report suspected cases of child abuse still exists, however. Wolfson (1980) cited the following reasons why child abuse is underreported by professionals:

Child maltreatment is undoubtedly much underreported.

1. Ignorance or misunderstanding of the reporting law, e.g., tendency to apply one's own more restricted definitions of abuse or neglect and report only abuse or neglect that is severe.
2. Ignorance or misunderstanding of child protection procedures, e.g., fear that the child will be automatically removed from the home and his parents criminally prosecuted.
3. Belief that child protection services are not of the same quality as the services that oneself could render, or, belief that the child protection services may even be harmful.
4. Failure to comprehend or accept that severe maiming or even death may result from one's failure to report.

5. Fear of losing clients or at least incurring their anger, and especially in rural areas, fear of jeopardizing one's personal or social relationship with the parents.
6. Inadequate diagnostic capabilities so that child abuse and neglect simply occurs without detection.
7. Frustration with the results of previous reports of suspected maltreatment, e.g., mishandled in an embarrassing way, no action taken, etc. (p. 3)

Theories and Models

A variety of viewpoints have been advanced to help explain child neglect and abuse. Some believe that the explanation, and presumably the treatment, should focus on the psychiatric problems of the parents (Parke & Collmer, 1975). Unfortunately there is little evidence to suggest that parents who abuse their children share consistently similar traits. However, it is widely held that many abusing parents were themselves the objects of early mistreatment (Green, Gaines, & Sandgrund, 1974).

Other theorists take a sociological perspective. They focus on the extent to which an adequate "social support system" exists for parents (Bronfenbrenner, 1974), and believe it is possible to construct predictive or high risk indexes concerning the likelihood of child abuse or neglect, thus enabling the community to launch preventive programs.

Still other theorists suggest that child characteristics (for example, the irritating quality of an infant's crying) may interact in complex ways with stressful conditions weighing upon parents to precipitate abusive behaviors. Many theorists connect child abuse to the widespread acceptance of violence in our society, in entertainment, on television, and in discipline. The use of corporal punishment in schools suggests to some that personal aggression is still a socially acceptable mode of behavior control (Zigler, 1976).

Taking a broad ecological view, Belsky (1980) suggested that parents with little experience in child care are likely to engage in maltreatment of children

Inexperienced parents who have little outside help may be especially likely to engage in child maltreatment.

"That which is not valued is not well treated . . ."

"Despite the fact that advances are being made in the fight for children's rights, it is doubtful that maltreatment can be eliminated so long as parents rear their offspring in a society in which violence is rampant, corporal punishment is condoned as a child-rearing technique, and parenthood itself is construed in terms of ownership. It is likely, moreover, that recent cultural developments, such as the denigration of the role of child care, stimulated in part by the women's movement, and the narcissistic "me first" approach to life that seems to be rapidly enveloping contemporary American society, work against efforts to prevent maltreatment by devaluing the responsibilities of parenthood. . . . That that which is not valued is not well treated should come as no surprise." (Belsky, 1980, p. 329)

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who are handicapped, "temperamentally difficult," or premature, especially if there is no exosystem (close community of friends and relatives) to help them. Such factors as unplanned births, scarce resources, and parental history of abuse or neglect, add to the likelihood of maltreatment.

What Teachers Can Do

Solutions require broad community cooperation.

Teachers have four functions to perform with regard to this national problem: (a) to identify and report instances of child neglect and abuse; (b) to see that neglected and abused children do not lose out on education as a result of their other misfortunes; (c) to teach each new generation the child-rearing principles and practices that will act as preventive measures for the future; and (d) to support comprehensive school policies that, in turn, support community efforts in the prevention and treatment of child abuse and neglect (McCaffrey & Tewey, 1979). Teachers, school psychologists, counselors, and others who have frequent contact with children can form an early warning network. Such an alarm system can pick up signs, report them, and often avert tragedy.

Legal Systems of Reporting

Teachers must report observed cases of child abuse.

All the 50 states have systems to expedite the reporting of suspected abuse and neglect of minors. The Pennsylvania procedure is illustrative. Pennsylvania state law requires the reporting of suspected cases, not only by school personnel but also by physicians, nurses, dentists, hospital employees, day care center workers, and other persons whose employment brings them in close contact with children. The mandated procedure is to file a written statement with the local county welfare agency. When reports are made in good faith, those reporting are protected from legal reprisals. If the reports prove to be unfounded, those reporting are notified, and all pertaining records are destroyed.

Pennsylvania's Child Protective Services Law became effective in November 1975. It provides an initial report channel, the "Child Line," a tollfree 24 hour telephone service with a multilingual staff. Reports can be made by any citizen, and they may be anonymous. The calls may not substitute, though, for the written statements required of persons in certain roles. Calls on the Child Line are noted, and data are fed to appropriate county welfare agencies. Investigations are subsequently made and suitable actions taken.

Signs of Child Abuse and Neglect

Evidences of abuse and neglect may be signaled by the child's appearance or behavior, by parental behavior, or by some combination of these factors. Pennsylvania's public information material highlights the following warning signs:

- Does the child often bear bruises, welts or burns?
- Does the child complain of beatings or other maltreatment?

- Is the child usually unclean or is his clothing consistently torn and unwashed? Is the child often dressed inadequately for the weather?
- Is the child underfed? Does the child complain of hunger, going to bed hungry, or missing meals because of punishment?
- Does the child linger at neighbors' homes at mealtime?

Child's Behavior:

Observe the child's behavior.

- Is the child constantly crying?
- Is the child extremely fearful?
- Does the child frequently miss school?
- Is the child left unattended or allowed to wander about on his own?
- Is the child running around the neighborhood at odd hours? Is the child frequently not allowed (locked out) in his own home?
- Is the child emotionally disturbed due to family breakdown or serious illness, with the parents neglecting or refusing to secure medical care and treatment?
- Is the child forced to take over adult responsibilities, such as a six-year-old in charge of younger children or preparing meals for the family?
- Is the child exposed to degenerate conditions in or out of the home?
- Is the child overworked or exploited?

Parental Behavior:

Warning signs are present in adult behavior, too.

- Do the parents leave small children unsupervised or at home alone?
- Does the parents' excessive use of alcohol or drugs interfere with the care of the child?
- Are the parents disinterested when approached about problems concerning the child?
- Does the parent administer unusual punishment such as excessive shaking of the child, locking the child in a room or closet, or using objects such as belts or cords to strike the child? (Pennyslvania Office of Children and Youth, 1976)

Unless such conditions are reported, children will continue to be killed or permanently injured, physically and emotionally. Parents and other adults will be encouraged to lash out at children because of personality problems, ignorance, and/or the frustration that flows from inability to cope with problems.

Hunger

A particularly worrisome aspect of child neglect is hunger. Hunger increases nervousness, irritability, and inattentiveness in pupils. Those qualities appear as disinterest and lack of concentration and they can contribute to failure to learn. Long term malnutrition is accompanied by lethargy resulting from a general low energy level. Children whose nutritional needs are simply neglected or those from families with little money and little health care can be profoundly and adversely affected by the poor nutrition that often accompanies those conditions.

It has been estimated that about one-fourth of all American school children go to school without having eaten breakfast. Even if they get sufficient nutrients later in the day to sustain them, a skipped breakfast can result in hunger pangs and depleted energy by midmorning.

An early part of the assessment of any school learning problem should be a probe into general nutritional level as well as meal intake regularity. The school nurse can be helpful if asked to check the child's appearance and eating habits. It is often necessary to verify the situation by actual family contacts, too. Children, and especially older children, may be unwilling to reveal home conditions of which they think school personnel may not approve.

Poor nutrition contributes to learning problems.

It is a safe guess that poor general nutrition and improper eating habits are the sole culprits in many school learning problems and that they aggravate other problems. When hunger saps a child's ability to attend and concentrate, the result can resemble mental retardation, learning disabilities, poor hearing, or withdrawn behavior. Since improper nutrition and food intake habits are amenable to correction, they should be checked out early in the assessment process and changed if necessary.

Educational Adaptations

As might be expected, these children present a great variety of educational and background characteristics. They may come from the well-to-do homes of business and professional parents or from abject poverty. Their parents may be young or old, well or poorly educated (in the academic sense), and of any race or religion. The children themselves may have records of doing well or poorly in school. Sometimes the school setting is a haven or refuge. At other times, it adds to the child's problems when failure and rejection by other pupils and staff occur.

Informal assessment is a first step.

Teachers should show warmth and acceptance for abused and neglected pupils; at the time, the teacher may be the only adult in whom the child can consistently place confidence. All teachers should be encouraged to start an informal educational assessment with any child who displays one or more of the signs of abuse and neglect listed here. The assessment should be made whether or not the suspected case is reported to local or state authorities. It is advisable to ask a special teacher to join in the initial informal assessment. Special educators who are likely to be most helpful are those with particular knowledge of slowed cognitive development, learning disabilities, and behavior disorders. From our own observations, we believe (a) that youngsters who show these characteristics early in life are more frequent targets for adult violence, and (b) that cognitive development and orderly personal-social development are particularly vulnerable to the wanton and irrational attacks that generally characterize such abuse.

The educational procedure of choice, then, is the familiar one of establishing the best possible match between the child's needs, as determined by the assessment, and the instructional program. Concomitantly, the involvement of parents in developing and agreeing to an individualized education program may open the door to a better understanding of the home situation.

Serving the children of battered women is a related and potentially growing problem for the schools. A *New York Post* article (December 6, 1978), noted reports of "more than 4,000 women beaten by husbands in the past fifteen months," in New York City alone. As battered women are increasingly placed in protective shelters, they tend to take their children with them. Fear of reprisal is often given as a reason for not divulging new home and school addresses. Home contacts are difficult because of frequent moves. Extremely sensitive treatment by teachers, counselors, and other school staff is a necessity (Zuckerman, 1979).

Centers for battered women bring new children and new challenges to some schools.

Teaching Better Parenting

Teachers have a huge stake in the effectiveness of the nation's parents now and in the future. When teachers and parents together help youngsters to establish self-control and thoughtful consideration of others, the results are favorable for the future of those children both as parents and as well educated people. So one place for teachers to concentrate is on those pupils now in school. Sequential instruction at all grade levels in attitudes and behaviors conducive to mature and mentally healthy development is probably the best assurance that neglect and abuse of children will diminish and disappear.

Parent education is a must.

Another area for concentrated effort is with the parents of children now in school. Continuing parent education and counseling have important places in the mission statements of public and private schools. Parents, especially parents of exceptional children, are almost always interested in becoming more helpful and skillful with their children. Increasing numbers of valuable learning opportunities are available to all parents. Many volunteer groups, such as local chapters of the National Association for Retarded Citizens, sponsor training sessions for parents.

Resources to help the chronic child abuser are growing, too. The National Committee for the Prevention of Child Abuse (NCPA) issues educational materials on child abuse, prevention of child abuse, and parenting. There are hundreds of local chapters of Child Abuse Anonymous in the United States. When fathers and mothers recognize in themselves the conditions that trigger episodes of child abuse, preventive support is only a telephone call away. In a model similar to that of Alcoholics Anonymous, this organization's members aid each other by distraction, positive modeling, peer counseling, and professional help when needed. Teachers may locate nearby chapters by telephoning the local public welfare office or social services clearinghouse, or by asking the school social worker.

Organizations offer help.

The most promising preventive measures through improved parenting are imbedded in very early childhood intervention systems, as illustrated earlier in this chapter. Early intervention models *typically establish and maintain relatively frequent and regular contacts with the parents of young children in a* *framework of friendly interest and support.* This is the key to prevention of most child neglect and abuse and to its prompt detection if it does occur.

Better parenting, then, can be approached in four ways: (a) sequential instruction of parents-to-be while they are in school; (b) inservice education for parents of school age youngsters; (c) referral of parents, when appropriate, to agencies designed to help them; and (d) guidance of parents in the earliest weeks, months, and years of their children's lives, as part of the new move toward very early childhood education. Each approach has the potential for effective provision of needed educational opportunities under conditions of close cooperation between school and home.

Drug Handicapped Learners

Youth cite drug abuse as a major problem

In a survey that polled a sample of United States youth about their key problems (Gallup, 1977), drug use and abuse was ranked highest. More than one-fourth of American young people (27%) called it a major problem. Seven percent said the same about alcohol use and abuse. While the survey permitted multiple answers, it is probably a fair estimate to say that close to one-third of teenagers feel these two conditions combined make up the biggest problem facing their generation.

The continued use of drugs, alcohol, and narcotics may produce irreversible nervous, muscular, digestive, and circulatory system damage. Even occasional use can result in disturbed mental processes and the loss of behavioral controls. In connection with motorbike or automobile operation and in sports such as swimming, boating, skiing, skating, snow scootering, and surfing, even a small amount of alcohol, tranquilizers, amphetamines, barbiturates, hallucinogens, or narcotics sharply increases the hazards of serious injury or death. The danger is not only to the user but also to innocent bystanders (Armor, Polich, & Stambul, 1976).

Exact figures are elusive.

No one has exact figures on the abuse of alcohol and drugs by school age children and youth, but the numbers are substantial—probably above one million. Because pupils and parents alike tend to hide the facts of addiction or abuse and to deal with their consequences outside usual educational, public health, legal, and social agency channels, actual incidence, prevalence, and rate of change are not known.

What Teachers Can Do

The same reluctance to acknowledge the problem has kept both parents and their children ignorant about drugs, alcohol, and narcotics. Children who are emotionally unprepared to handle a confrontation with users may be easy converts to the idea that it is "the thing to do." The fact that the escape provided is fleeting, deluding, and ultimately deflationary eludes them until too late. It is only recently that schools have been enlisted in the correction of the situation. The strategies listed here are familiar, but their application to this problem is relatively new.

- Make school an exciting and fulfilling place for each pupil, thus reducing the likelihood that "kicks" will be sought through drugs, alcohol, and narcotics.
- Provide students with more authentic information. Since experimentation with drugs often begins before adolescence, educational activities should begin in elementary schools (Stoll, 1974). Materials are available from the National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse, National Clearinghouse for Drug Abuse Information, National Institute of Mental Health, and Education Commissions of the States. Locally, teachers can obtain resources through mental health agencies.

Familiar strategies can be applied.

- Seek family counseling services on behalf of children who are seriously disturbed by their parents' or other family members' use of alcohol or drugs.
- Improve the preparation of teachers. Funds for enhancing teacher competencies are available from the federal government through the Drug Abuse Education Act. Support sometimes comes directly from the National Institute of Mental Health and the U.S. Office of Education. Other funds have been channeled through and supplemented by states.
- Think of educational offerings as multidisciplinary. Use regional and community resources such as lawyers, narcotics agents, pharmacists, physicians, agencies such as Alcoholics Anonymous, and rehabilitated drug addicts.
- Bring the educational effort to a strong focus at the ninth grade level and maintain its vigor throughout the secondary school years. Arrange for educational services to follow and maintain the participation of dropouts.
- Establish an emergency center in the school system where students may be taken if they are discovered to be actively experiencing a drug episode. The center staff should also provide emergency help on a self-referral basis for students who consider themselves in danger from drugs.
- Orient staff, students, and parents to possible indications of drug abuse. Use these indicators with sensitivity but *use them* to help in location and referral of drug, alcohol, or narcotics abuse:

Regular wearing of sunglasses, even indoors, to hide dilated pupils.
Long-sleeved clothing worn at all times to cover needle scars on the arms.
Marked changes in appearance over a short time.
Sharp drop in quality of school work and in dependability regarding completion of assignments.
Temper tantrums that originate suddenly with apparently little provocation.
Drowsiness or sleeping in class.

Teachers need to be alert to signs of drug abuse.

Exceptional children are not exempted from the ignorance, curiosity, and social pressure that contribute to drug, alcohol, and narcotics use. All teachers, therefore, should be familiar with the problem in order to talk about it knowledgeably with pupils, both in class and individually. Open and honest communication will help pupils feel that they can talk without fear of their confidences being violated, that they are not inviting punishment when they reveal problems, and that they will be listened to, understood, and helped.

Scare tactics have no place in the direct interaction of teachers, parents, and pupils regarding drug, alcohol, and narcotics abuse. Instead, inservice and adult education should help both teachers and parents to understand the situation more fully and to react sensibly when faced with such problems in young people.

Rehabilitation

Teacher and pupil models send effective messages.

The rehabilitation of youthful alcoholics and students addicted to drugs is a task far outside the responsibility of the schools. Certainly, though, teacher organizations and school boards can help other agencies by adopting policies and developing practices that address the problem intelligently and constructively, such as driving pushers away from the school environs and educating teachers and parents to do a better preventive job. Most important, however, are the models that teachers, parents, and other pupils represent. If pupils in trouble are helped by the people around them in school to learn to live as well adjusted citizens—people who are "turned on" by their own lives without need for the highs, jolts, and dependencies engendered by alcohol, drugs, and narcotics—the schools will be making their best contribution.

School Age Parents

Annually, in the United States, an estimated 570,000 births to teenage mothers are recorded. The number has been increasing by about 3,000 annually. The increase is connected with a growing teenage population rather than a rising rate of pregnancy. Seven out of 10 mothers under 15 years of age receive no prenatal care in the first 3 months of pregnancy.

The prospective parents usually have known each other for some time.

Girls who become pregnant during school age come from all socioeconomic classes and from both public and private schools. All races, all religions, and all parts of the country, rural and urban, are represented. The pregnancy is not typically the consequence of a casual or fleeting relationship. Ordinarily, the mother and father have known each other at least a year and their strong feelings for each other were present substantially before sexual relations began (Howard, 1975).

The parents usually are close to the same age, come from the same socioeconomic background, and achieve at about the same level in school; neither is typically more worldly-wise than the other. Pressure to initiate the sexual relationship may have come from either partner. When it does take place it is most often in the context of two individuals who are embarking, for the first time, on an interpersonal relationship they both consider serious.

A generation ago, most teenage mothers gave up their infants for adoption without ever seeing them. But that is no longer the case. A 1973 estimate indicated that 85% of the school age girls who give birth each year keep and raise their children (Nolte, 1973).

Early Patterns of Schooling

The traditional pattern of educating school age parents had three characteristics. First, mothers-to-be were excused from school as soon as the condition was known, and home instruction was provided. Second, if the mother returned after the baby was born, it was usually to a standard program in a different school. Finally, nothing was done to change the father's school status.

That pattern prevailed until approximately 1960. Whether or not the parents were married did not affect how the public schools educated them, though marriage did make a difference in their social acceptance. Beginning about 1960, a number of school districts took more constructive steps, especially for school age expectant mothers. The most common decision was to establish a special center with the following features:

1. Pregnant girls who wished to continue to attend school were supplied with transportation to the center.
2. The center was located apart from regular school buildings or in a separated section of a regular school.
3. The curriculum was extended by prenatal and marriage counseling as well as intensive child care instruction.
4. The typical curriculum was restricted to core academic subjects because the centers were not ordinarily equipped for laboratory sciences, business practice, physical education, art, and music.

Today, pregnant teenagers tend to stay in school.

Girls who elected to attend the centers did so until giving birth. Afterward, they were allowed to return to regular schools if they wished and if circumstances permitted. Often, they returned to a regular school different from the one attended previously or to an evening high school, if one was available. Alterations in educational programs for school age fathers remained uncommon.

Weaknesses in Traditional Approaches

In 1973 a school law expert began a series of articles that were influential in revealing the inequities of prevailing educational practices and in turning education for school age parents in a new direction (Nolte, 1973). Nolte reported that the restrictive school board policies guiding the education of pregnant girls dated from an era when pregnant women were expected not to appear in public, much less attend public schools. These policies, ostensibly intended to protect the health of the mother and discourage marriage and pregnancy among students, did not work and did not stand up under court challenges.

Restrictive policies did not work.

School officials are not competent to judge whether school attendance constitutes a health hazard to pregnant girls. Moreover, competent medical personnel do not believe that it does. Also, as far as the courts are concerned, *The courts support rights to education.*

to deny education to a pregnant girl either as a punishment or as an example is unjustifiable. Such action infringes on the right to due process and the right to equal protection under the law. Attempts to prove immorality, disruptive behavior, or danger to the welfare of other students simply on the basis of presence in school are very difficult to substantiate, especially as a basis for a general policy of exclusion. Furthermore, when schools have tried to limit the participation of pregnant students in extracurricular activities, the courts have lifted the restrictions.

Some actions of school boards or school administrators seem arbitrary, capricious, and unreasonable, even without the intervention and interpretation of the courts. In one instance, a high school principal would not permit a 17-year-old unmarried mother to run for homecoming queen because "only virgins can run for homecoming queen." In another community, two high school graduates challenged the board of education's decision to keep their pictures out of a high school yearbook because they had become pregnant in their senior year (*Sharing,* 1974).

Nolte (1973) concluded that it is legally irrefutable that schools should be just as open to students who are pregnant as to all other students. In addition, there are sound reasons for adding to the usual curriculum and for individualizing instruction to satisfy the specal educational needs occasioned by pregnancy.

The traditional pattern of home instruction has weaknesses, some of which follow:

Home instruction and special centers both have drawbacks.

1. It is not as complete as in-school instruction. The teacher is with the pupil only a few hours per week. Laboratories, practica, and libraries are not available.
2. Home teaching does not routinely provide opportunities for class discussion, working on projects with other students, regular school hours, supervised study, or access to teachers and others to ask questions.
3. At a time when emotional problems may be present, the girl is removed from contact with friends in the same age group and may feel isolated, even abandoned.
4. Fear or embarrassment may prevent requests for home instruction. Girls may be too concerned about themselves or the inadequacies they feel characterize their homes.

Special centers, too, have drawbacks. Some are similar to those connected with home teaching. As noted earlier, special centers often do not include the comprehensive curricular and extracurricular opportunities of regular schools. Here, too, students are separated from potentially supportive friends among the student body and faculty. Aggregating students for educational purposes simply on the basis that they are all pregnant is grouping based on an educationally irrelevant criterion.

A Modern Approach to Education

Today's preferred educational practice is to afford each school age parent or parent-to-be two options: (a) to attend a special center or (b) to continue at the regular school with needed supports.

Garmezy (1975) described how one district moved to assure that pregnant girls and young mothers might continue their education in their regular school. Purposes of the program were to:

> Enable student mothers to remain in the regular schools;
> Provide them with practical information and supervised experience in child care and parenting;
> Provide their children with individualized care in a safe and stimulating environment. (p. 4)

Regular classes and schools are preferred.

For ten years, Minneapolis operated a separated program for pregnant girls and young mothers. Increasingly, it was found that these pupils wanted to continue their schooling where they were already enrolled. In 1971 that was made possible in a pilot secondary school in order to determine what would need to be done to make it feasible elsewhere.

Extrapolating from Garmezy's (1975) report, certain characteristics exemplified preferred practice in maintaining pregnant girls and young mothers in their regular school programs and in personalizing education to suit their needs. The focus here is on secondary schools. Although the age range of pregnant girls takes in some 11 and 12 year olds, the numbers in the school age group do not loom large until ages 13 and 14. Where younger girls are involved, they too should have opportunities to continue in regular schools. The preferred practices cited are as follows:

Preferred practices benefit mothers and their infants.

1. Home economics facilities should be equipped and staffed for day care, including food service, for infants and toddlers during the school day. A staff-child ratio of one to four is suitable, although service should be provided even if only one child needs day care. (The service may be extended to married teachers and other staff, if desired, on a fringe benefit or paid basis.) Basic equipment extends from diapers and cribs to toys and indoor play areas. The day care service should be free to pupil-parents and available until the mother's graduation.
2. Pupils should have prenatal counseling and postnatal instruction in parenting skills. If permission is obtained from the parents of children in day care at the school, other pupils, boys as well as girls, may participate in their care as part of the home economics curriculum.
3. The city or county public health service should furnish medical supervision as needed. A public health nurse should be assigned to work at the school, with the amount of time dependent upon the number of babies involved.
4. The fact of pregnancy or motherhood should not be allowed to overshadow the pupil's continuing need for individualized education matched to cognitive level, learning style, interests, and present achievement, like all other pupils.

5. Transportation should be supplied, if needed, to and from school.
6. Recognition should be given to the needs and rights of both fathers and mothers, whether married or unmarried.
7. Mothers should have appropriate opportunities to feed and play with their children during the school day.
8. The entire professional and support staff of the school needs orientation to the program long enough before it is started to allow questions to be raised and answered, and to allow everyone at least to make progress in working out their moral and ethical feelings about it.

Fathers' needs and goals deserve attention.

Agencies dealing with school age parenthood are turning more attention to fathers, also. There is evidence to justify the belief that many very young fathers wish to take the actual father role with their babies (Howard, 1975). Of the others, most will want a future marriage in which they will have true father roles. So the long-range goals of young fathers are not essentially different from those of young mothers:

1. To complete schooling and acquire the competencies to maintain independence in competitive society.
2. To learn how to be a worthy parent.
3. To acquire maturity in personal and social behavior.
4. To be a contributing and stabilizing force in family life.

It is a fact of life that teenage parents are and probably will continue to be part of every community. In earlier days, the unmarried parents and their child were objects of scorn, punishment, or both. These attitudes still are not uncommon. However, many people realize that traditional responses to the problems of school age parents and their offspring have been inadequate, and thus a new look is being taken at young families.

There are as many individual variations among teenage parents as among any other segment of the population. Adolescents range all the way along a developmental continuum from childhood to adulthood. Age is only a general guide. Early maturity in one area may not be paralleled in others, whether affective, motoric, or cognitive. It is misleading to think of school-age mothers and fathers as a homogeneous group.

Services are individualized.

The new approach, therefore, musters services on an individualized basis to provide the additional measures of support that are needed by both parents. They include information, practical help, counseling, job guidance, loans, and personalized education. The consequences can only better individual and family life for young parents and give their children a better start.

Emerging Problems

The problems and issues discussed in this section, although recognized for some time, have taken on new urgency in the social, political, and economic context of the 1980's.

Categorizing and Labeling

The categories still frequently used to label and place exceptional children do not serve anyone well. Labels such as *retarded, disturbed,* and *defective* have the effect of narrowing rather than broadening children's opportunities. Educators, we believe, should focus on assessments and classifications that are meaningful for instructional purposes.

There are many voices speaking to special educators these days of the necessity of dropping the degrading, nonfunctional categorical systems of the past. The President's Committee on Mental Retardation (1969) titled one of its major reports *The Six-Hour Retarded Child.* Its implication is that educators are the only ones who find it necessary to apply the label "mentally retarded" to many children. Following the *Larry P.* v. *Riles* (1972) court case in which the schools were enjoined not to use intelligence tests as the primary approach to classification of Black children, the numbers of children labeled educable mentally retarded in California schools declined sharply.

Labels are limiting.

Apparently special educators are unable to satisfy themselves or the Congress about a definition of learning disability, and the *Lora* case in New York City seems destined to cause significant changes in the classification of students as "emotionally disturbed." Is it really necessary to continue to label children in traditional categories to win political support and to ensure accountability? In our view, the answer is "no," but the process of change will be difficult.

There is no adequate way to delineate the population of handicapped children by attending exclusively to attributes of the children themselves. Many of them are handicapped only in situations that do not accommodate their needs. The required focus of attention is broader than the child in the classroom. It should encompass both school and family situations. This broader ecological framing of the problem is another aspect of the need for new systems of classification.

An ecological view provides a more appropriate perspective.

It can be argued, of course, that the traditional categories and labels serve important social and political purposes, and that they need to be preserved—especially as a means of rallying special interest and support by legislators and administrators. Hobbs (1975), in two contrasting passages of his important work on the classification issue, stated the problem as follows:

> Categories and labels are powerful instruments for social regulation and control, and they are often employed for obscure, covert, or hurtful purposes: to degrade people, to deny them access to opportunity, to exclude "undesirables" whose presence in some way offends, disturbs familiar custom, or demands extraordinary effort. (p. 11)

On the other hand,

> Categories and labels may open up opportunities for exceptional children, facilitate the passage of legislation in their interest, supply rallying points for volunteer organizations, and provide a rational structure for the administration of governmental programs. (p. 13)

We cannot much longer have it both ways, maintaining simplistic categories while denying their usefulness and admitting their harmful effects. An educational program is urgently needed for legislators, administrators, teachers, parents, and others to elevate everyone's awareness of the need for a more sophisticated conceptualization of the classification problem.

It should be possible to say to legislators, parents, and others something like the following:

"There are children whose intellectual development is unusually slow, some who do not respond well to ordinary forms of instruction, and others whose behavior is disturbing in school situations. In times past, we have used various categories and labels for such children, like *mentally retarded, learning disabled,* or *emotionally disturbed*; and we have even been caught up in systems that segregated special groups of such children.

Developmental problems deserve a broader approach.

"But now we are discovering more promising approaches to developmental problems. In the process, we see the necessity of much more detailed and broader classification systems, encompassing not only the child but his or her life situation as well.

"So, while we recognize that terms such as *mentally retarded, emotionally disturbed,* and *learning disabled* have been and continue to be affectively loaded rallying points for social action, legislation, parent groups, and even professional associations and literature, we urge everyone to understand that these terms need no longer be the starting points for special education programs. There is no special merit in sending children off to isolated classes and centers for instruction by separate categories. Instead, the study of children and of their life situations is now proceeding to finer points, all of them oriented to improving instruction. And, as we take this new approach, we can spread attention to other children as well, many of whom neither fall within the traditional categories nor are well served in our regular school programs."

Using this rationale and implementing it at many levels, perhaps in a decade or two we can extricate ourselves and the children we serve from the confinements and hurts of an outdated categorical system, without glossing over the great human commitment and material resources that are needed if all children are to be effectively served in the schools.

Related Services

The definition poses difficulties.

Under United States law, the schools are required to provide instruction and *related services* to handicapped children. A difficult problem has emerged concerning the definition of related services, which are described as "transportation, and such developmental, corrective, and other support services . . . as may be required to benefit from special education" (Public Law 94–142, Sec. 602.17). Within this definition, the term *other supportive services* has presented the most difficulty.

While many of the services provided by audiologists and psychologists are easily recognized as important and appropriate, what about recreation, protracted psychotherapeutic services, parent counseling, and medical services? In one Midwestern community, an issue arose over "equestrian therapy" and supervision (giving horseback riding lessons) for treatment purposes. Some observers have been especially concerned about the rapid development of physical and occupational therapy programs in the schools. These are sometimes initiated on the basis of only perfunctory approvals, nominally supervised by physicians, and appear to have only tenuous connections to instructional programs. At a time of budgetary recisions, there are fears that all sorts of functions may be forced upon the schools and their limited budgets. One state education commissioner commented:

> Purchases of these supportive services by education agencies means fewer dollars are available for instructional purposes.... We urge, therefore, that the relationship among instructional services, social services and medical services, and the responsibility of state education agencies to guarantee them be clarified. *(Education Times,* 1980, p. 4)

Budgetary restraints affect attitudes toward related services.

A review of judicial interpretations of the "related services" concept makes it clear that

> The concept is extremely broad and ... has been expanded, rather than limited, by most judicial interpretations. This result is not entirely attributable to the passage of Public Law 94–142. Given an expanded school clientele, judicial concepts of education, and educational opportunity, related services are merely those services inevitably associated with assisting children in reaching basic objectives such as walking, talking, socializing, or otherwise becoming prepared for life. (*FOCUS*, 1981, p. 18)

Obviously this is a problem area that has vast implications for the curriculum and for school budgets. It will receive continuing attention in the future.

The Large Cities

Problems in implementing new policies that address the education of exceptional students have been especially severe in many of the nation's large cities. Factors contributing to these problems include the following:

Large urban settings have special problems.

- Resources are unusually scarce. Large numbers of children and families in major cities live in a culture of poverty; similarly, many large city governmental bodies have experienced extraordinary budgetary problems.
- The number of exceptional children "identified" from minority groups is high. Despite broad efforts to be nondiscriminatory in assessment and program decisions, assessment personnel tend to recommend minority children for special education programs at a much higher rate than they do other children. Resistance to and resentment about special education classification systems are highly prevalent in many big cities.
- Major revisions of educational bureaucracies have been required and have proven to be difficult.

- Educational directives that flow from governmental monitoring and court decisions have massive effects, causing more than the usual difficulties in large cities.
- Teenagers in inner-city environments show poor achievement in basic academic skills, along with increasingly high unemployment.
- Teachers' associations and unions are especially strong; they are able to complicate the processes of leadership, priority setting, and change. For example, there is a strong tendency to protect tenure for teachers even if it means shifting essentially untrained personnel into "special" positions. At the same time, constructive assertiveness on the part of teacher organizations has proven a positive force in assuring that teachers are less often arbitrarily given assignments for which they are not prepared.

Loss of trust in institutions is a byproduct.

- The great complexity of urban environments results in many breakdowns and loss of trust in institutions and systems.
- School matters have enormous impact on governmental budgets and thus tend to bring the schools into the political arena in complicated, unpredictable ways.

It is quite clear that if the new educational policies cannot be carried out effectively in the large cities, they will lack credibility and effectiveness everywhere (Levine, 1978).

Rural Areas

Rural areas experience many of the same problems, particularly those associated with poverty. The problems of bureaucratic restructuring, complexity of systems, and loss of morale are not so immediate, but they do exist; the struggles for improvement are carried on at regional or state levels.

Recruitment of specialists is a major difficulty.

Special education services have always been maldistributed, but never so obviously as in recent years under "right to education" directives. Special problems exist in poor rural areas, particularly in the area of recruitment of special educators. Specialized training programs are usually developed in large universities in urban settings; their graduates tend not to accept teaching positions in rural areas.

Solutions to the problems in rural areas probably will require several kinds of efforts, among them the following:

1. Employment of more generic specialists at local levels who are then "backed up" by regional consultants.
2. More delivery of specialized continuing education to rural educators by college staffs and regional staff development specialists.
3. Training of local personnel in effective staff recruitment/retention strategies.
4. Provision of special incentives to attract qualified professionals to rural and remote areas.

> *"The largest problem confronting new rural teachers in the plains and mountains of the northern Rocky Mountain region is the reality of rural living. Romantic and idealized notions of rural life create disillusions that often send the unprepared hurrying back to the city lights. Ironically, these same shock elements when viewed positively are the very features that are viewed by others as essential to the chosen rural lifestyle ... One must live ruralness* after the novelty is gone *to truly appreciate the reality. That is the acid test separating those who can successfully cope from the short-term romantics." (Zetler, 1980, p. 1)*

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5. Building stronger support systems for beginning teachers in rural and remote areas.
6. Increased use of modern technology (such as miniaturized electronic devices, new forms of radio and television transmission, remote access computer terminals, etc.) to deliver training to both teachers and pupils.
7. Increased recruitment of outstanding educators from rural areas for specialized training.

Training of indigenous teachers is desirable.

Some training funds may need to be reserved for use by local schools in rural areas as they recruit, select, and support the training of indigenous teacher candidates—those who are firmly committed to return, with their specialized skills, to the sponsoring communities.

Funding

Always a problem, the funding of specialized school programs looms now as a larger and, to some extent, different challenge. The courts are ordering new directions and more rapid movement in special education, but they can provide no money; they only have the power to direct. At the same time, appropriations for schools have tended to be cut or limited in expansion. The problem has become how to do more with less.

In addition, as programs emerge for the integration of special education with mainstream education, the eligibility of the schools for state special education financial aids frequently becomes uncertain. In many states these financial aids are narrowly categorical, and are available only when specific children have been labeled and placed in specialized programs. School leaders in those states who wish to accommodate handicapped children in the mainstream are rewarded only for maintaining isolated programs.

Funding that is dependent on categorical child counts gets in its own way.

If schools are to develop a broad continuum of services that do not uniformly require the categorization of handicapped and gifted children in traditional niches, new units for documenting the work of special educators must be defined. The practice of categorizing, labeling, and listing exceptional children, and then using the size of the roster as the measure for public financial support of programs, is unnecessary and defeating. Public outcry is mounting. Key changes must come in both legislation and regulations.

New units for "triggering" special categories of funding are needed.

Part of the answer may lie in shifting the basic reimbursement unit from the child to the specialized teacher or other professional worker, and then permitting each to be employed in whatever capacities will enhance educational opportunities for children with exceptional needs. An alternative procedure is to fund broadly framed programs or major program components. Hobbs (1975) envisioned a system in which costs of "requirements of service" or specialized program components would be reimbursed to local districts from state and/or federal treasuries, and computerized systems would help to ease accounting difficulties.

Examples of these alternatives are beginning to emerge in several states. The California master plan, which was initiated in the mid-1970's, offers special state financial support for major programmatic units rather than for children-in-categories. In Minnesota, a state special education reimbursement system has recognized "necessary personnel" as the basic unit for many years. In any case, the definition, dissemination, and acceptance of new units, other than child-in-category, is likely to be a major challenge to special education for some time (Bernstein, Kirst, Hartman, & Marshall, 1976).

Who shall properly be served?

A fundamental funding question, of course, is just what proportion of the total child population shall be the concern of special educators. The parallel question is how much the public is able and willing to pay for under the special education rubric. An increasing number of signs indicate that legislators want to put a "cap" or some kind of rational control on special education expenditures. One convenient accommodation to the budgetary recisions of the early 1980's would be to set that "cap" at a low level by including only the most distinctly and severely handicapped. At this time, the common percentage claimed for "handicapped" pupils is about 10% to 12% of the total child population, and "gifted and talented" students add approximately another 3%. Some persons would stretch the percentages; others would confine them to the most severely handicapped and most highly gifted children, perhaps aggregating only 4% to 5% of the general child population.

At least for the near future, it is our assumption that the contemporary special education thrust, in addition to providing leadership in programs for the highly exceptional, will need to supply a large proportion of the energies, commitments, and skills necessary to serve the many other pupils with special educational needs. It is mainly in the latter aspect of the special education mission that new relations with regular education must be negotiated. Further, it is assumed that special educators themselves will need to lead the way in setting limits on programmatic costs. If attention shifts exclusively to severely and distinctly handicapped children and abandons those with mild and moderate degrees of handicapping conditions, the implications will be profound indeed. They will affect the professions involved in special education and their organizational structures, the regular schools, many parents, and, most important, the children to whom promises were made and then abridged.

Private Schools

Due process rights can be misused to secure placements in private schools.

One convenient method that allows local schools to comply with "right to education" directives is to send difficult children to private schools. Although the policy creates no programmatic disturbances at local levels, it is beset with many difficulties. Chief among them is the unfortunate removal of the children from home and community supports. If the movement in this direction is great, costs can be enormous, as they now are in several states. Furthermore, political forces can develop to remove all of special education from local control. Powerful, well-meaning advocates for private schools easily could use their resources and the due process mechanisms to build a new private school system in the nation and, in the process, deprive local day schools of the energies and resources necessary to develop broad and effective programs for exceptional children.

Sometimes a special version of the medical model emerges in which psychiatrists or other noneducational specialists virtually control referrals and admissions to private schools. The whole system can be turned to the advantage of relatively affluent families—those that can secure private diagnoses and maneuver through the necessary steps of referral and placement. In some places, expensive private schools are used mainly by White handicapped children, and thus tend to create or preserve racial segregation.

Exceptional children need all the help they can get, and some of it, appropriately, comes from the private sector. Some private schools are excellent and the education of exceptional children has been aided by many other forms of private contributions. We need to make visible the examples of healthy interaction between public and private programs for exceptional children and, equally, to expose and oppose unhealthy operations and trends.

Staff Preparation

Teachers were not trained to accommodate a broad range of differences.

Public Law 94–142 was thrust upon largely unprepared educators. In a 30 year period from the end of World War II to 1975, the numbers of exceptional children referred out of mainstream classes to special classes and centers increased about sevenfold. Similar "pull-out" or "set-aside" programs were developed in other special areas, such as bilingual education and education for the disadvantaged. The schools accommodated special needs by sending away the children who had them rather than becoming more adaptive to individual differences. Correspondingly, teacher preparation never seriously faced up to the challenge of individual differences (Howsam, Corrigan, Denemark, & Nash, 1976; Smith, 1980). Some discernible progress became evident in the late 1970's, but basic difficulties remain.

Even before Public Law 94–142 came fully into effect, the Comptroller General of the United States made the following observations in a report to the Congress:

> More and more handicapped students throughout the country are now being integrated into regular classrooms, and educators view specialized training of

> regular classroom teachers as essential to effective education of the handicapped. The Department of Health, Education and Welfare should now move to insure that regular classroom teachers receive more training in the special skills required for teaching the handicapped. (Comptroller General, 1976)

Beginning in the mid-1970's, the U.S. Office of Education offered financial support in the form of "deans' grants" to help colleges revise their preparation programs in the direction of broadening the roles of regular teachers to serve handicapped children. A similar set of grants to colleges and state departments of education assisted in the inservice reeducation of regular teachers for the same purpose. Further, the federally supported Teacher Corps mandated the installation of components relating to exceptional children in each of the approximately 100 teacher preparation projects it supported across the nation in the late 1970's. (The Teacher Corps program was "folded into" one of the block grant programs of the federal government in 1981.)

Awareness of need for changes in teacher education is growing.

Changes in special education programs are occurring so rapidly that training for new functions and roles will be an imperative for some time to come. More accurately, most of what is needed may be *retraining* for inservice teachers (both regular and special), principals, school psychologists, and other personnel. The organization and management of inservice education programs designed to help implement the policies expressed in Public Law 94–142 has received the specific attention of teacher educators and staff development specialists (Corrigan & Howey, 1980).

Increasingly, inservice education is organized on a total school or district basis, thus linking the inservice education to specific programmatic changes occurring in the schools. Rather than serving random collections of teachers who want to take a course, it is more often provided systematically for specific groups of personnel who are engaged in institutional change processes.

It is also increasingly common for schools to organize their own inservice education programs or negotiate with institutions of higher education for carefully tailored courses to meet local needs. Teacher centers and other organized projects, representing permanent forms of collaboration between schools and institutions of higher education, can help negotiate in parity the emerging inservice or continuing education programs.[2]

Professional associations have been increasing their involvement in retraining and inservice training for teachers. For example, The Council for Exceptional Children, through its Division on Teacher Education and a national RETOOL center, has started a special project for the training of college teacher educators and special education teachers. The teacher educators will be taught to use microcomputers and the special education teachers will be trained in the effective use of paraprofessional personnel.

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[2] Although inservice and continuing education are sometimes distinguished usefully, no distinction between the two is intended here. When treated separately, however, the term *inservice education* designates strictly local adaptations and training problems (e.g., preparing teachers for a reading series just adopted), while *continuing education* refers to more general studies (e.g., a course on the latest theories or principles of language development).

"Disabled people are moving into education in increasing numbers. They serve as teachers, college professors, administrators—and in a host of other educational roles. They share educators' common problems in building careers, but their contributions to education are unique.

"Teachers with disabilities make a difference in the classroom. They are sometimes students' only contact with a disability ....

"The American Association of Colleges for Teacher Education in cooperation with the National Education Association has begun to document disabled educators' experiences in teacher training and employment. The program is part of Project HEATH (Higher Education and the Handicapped)." (McNett & Merchant, 1981, p. 34)

Effective training and use of paraprofessionals is a major challenge.

Paraprofessionals have become an important and integral part of many special education teams. In some schools the number of paraprofessionals exceeds the number of teachers. Volunteers also add to the staff rolls. In a speech given at a National School Volunteers Conference in 1978, then U.S. Commissioner of Education Bowers estimated that there were six million unpaid volunteers working in the schools; their work was valued at more than one billion dollars. The effective preparation of such personnel and their use in classrooms, resource rooms, home teaching programs, and special classes has become a major challenge. Paraprofessionals and volunteers who work with exceptional students also enhance the performance of teachers (Greer, 1978; Kaplan, n.d.).

Relatively little has been done so far in organizing the preparation for paraprofessionals and volunteers or in evaluation of programs in which they are employed. Experimentation is underway in several two-year community college preparation programs (Kaplan, n.d.), but whether they should produce "all purpose" special education aides or specialists in sign language, speech technology, or other special fields remains unclear. In the meantime, the number of persons employed as paraprofessionals grows spectacularly and is likely to remain very high.

Evaluation

Greater effectiveness of specialized education has not been validated.

Special education may well be approaching a crisis in evaluation. When Dunn (1968) said he doubted that much of specialized education for retarded children could be justified, he triggered a wave of evaluation in special education programs. Since then, several large-scale meta-analyses of special education evaluative studies have turned up largely negative results (Arter & Jenkins, 1979; Carlberg & Kavale, 1980; Kavale, 1981). Evaluations of both psycholinguistic approaches to the teaching of children with learning disabilities and special versus regular school placements for exceptional children showed near "zero effects" of special education as compared with regular school services.

Although many detailed quibbles could be offered in criticism of these reports, they nevertheless stand largely unchallenged by contrary evidence; they document a major failure by special educators to validate their work.

Change Processes

College teachers know very well that changes cannot be brought about simply by explaining the contents of books like this one to experienced teachers or trainees. Regular teachers who take courses on mainstreaming insist that their school systems revise special education programs and provide the supports that teachers require. Training must be imbedded in a larger set of change-oriented activities if mainstreaming is to be accomplished.

When mainstreaming becomes the new strategy in a school system, the following basic changes must be made, roughly in the order listed:

Efforts toward significant change and development require training.

1. Top school leaders (school superintendents and other central staff members, heads of professional associations, and members of boards of education) must be aware of new possibilities and make commitments to the specifics of a new orientation.
2. Principals and teachers must be given opportunities to study the new proposals and to participate in planning specific steps toward change.
3. Needs assessments and plans should be developed in each school and in whole districts. Parents, parent groups, and other organized community interests should be closely involved. Changes in services for exceptional children often draw high general community interest, as well.
4. Training activities should be mounted in each school building, oriented at first to the specific problems and needs identified in the building. Teachers should be helped with their problems, recognizing that they already have many children needing special help in their regular classrooms. A bit later, there will be opportunities to bring back to the mainstream exceptional children now in special stations. But teachers prefer to deal with their current problems before more is urged on them.
5. Special education programs will need to be reorganized to begin to offer more support, indirect services, and team cooperation to regular teachers. The retraining of special education teachers, school psychologists, and other personnel may be required.

If the preceding steps are taken carefully, there is a good chance that the energies of regular and special education will be joined more effectively and that quality mainstream programming will ensue. Indeed, dozens of schools have undertaken serious efforts at mainstreaming in recent years with encouraging results.

Several models or systems for planning change procedures are available to educators who wish to develop mainstreaming models with all possible awareness and care. The Research and Development Center on Teacher Education at the University of Texas, for example, developed a Concerns-Based Adoption Model (CBAM) that can be adapted to local needs. This model focuses on the personal concerns of individuals when changes affect their life patterns. Hall, Wallace, and Dosseth (1973) and others who have advanced the CBAM model suggest that all changes involve a highly reliable series of developmental stages of "concerns." By assessing patterns of concerns within the institution facing the change effort, programs can presumably be tailored for maximum effects. Until concerns at the early stages are satisfied, it is assumed that efforts for solution at higher levels will be fruitless.

Useful models focus on the change process as it affects individuals and organizations.

Other approaches to change give attention to fundamentals of organizational processes and developments as parts of the change process (Bennis, Benne, & Chin, 1969; Havelock, 1973; Miles, 1964). Some of the broad systems for instructional management include mechanisms for implementation. The Adaptive Learning Environments Model (ALEM), for example, includes detailed training and monitoring procedures that can be used to manage the difficult processes of change involved in moving toward individualization for all students (Wang, 1980).

Issues and the Future

Here we share our views about emerging issues and possible strategies that may help to mold education for exceptional children in the future. This entire book has been directed to the need for change. Despite the many difficulties and candid treatment of problems, we have intended to express our optimism for the future of education in general and the education of exceptional students in particular. Especially in these final pages, that is the spirit we want to convey. Before outlining our view of the future for the education of exceptional students, however, a few general observations are in order.

Downshift in Priorities for Education

Schools in the United States in the 1980's are experiencing a paradigmatic downshift in the priority given to education in the allocation of resources. A similar trend has been noted in other parts of the world as well. During the 1960's, when the Gross National Product (GNP) was advancing in healthy fashion in most of the world, allocations of resources to education were advancing at about twice the rate of GNP increases (Husen, 1981). In the 1980's, GNP increases have flattened out and allocations to education have dropped below the GNP rate in most parts of the world. In the United States, less attention and resources are being given to public purposes, and more to the private sector, to military expansions, and to energy costs. A broad range of social programs is being reduced. Our general situation is not unique. Throughout the Western world, demands on education are continuing. Educators are facing the serious problem of meeting rising needs with fewer dollars.

The rate of increase in dollar allocations to education has dropped sharply.

Devolution of the Federal Role in Categorical Programs

A wave of change favors state level administration of categorical programs.

In the United States we are experiencing the rapid diminution of the federal role in categorical programs in a number of areas, particularly education. Although Public Law 94–142 escaped the block grant packaging of 1981, there is no assurance for the future. In any case, what was not accomplished by law may well be achieved, in substantial part, by other means, such as the erosion of monitoring staff. We can anticipate that many of the battles to achieve priority for special needs pupils which seemed to be won at the federal level in the 1970's will have to be fought again at state and local levels. The combination of funding recisions and block grants may force educators and advocates to replay old battles.

Disjointed Incrementalism

The expanding federal role in education since 1965 has largely taken the form of narrow categorical programs addressed to the needs of "marginal" students: those who are classified as handicapped, migrant, disadvantaged, or bilingual, for example. Each program has been created with its separate bureaucracy, timeline, and evaluation-monitoring system. Each has depended on annual appropriations, resulting in "soft money programmatic bubbles" in schools and colleges all across the nation. The apparent assumption is that none of these projects affects any of the others. However, as noted earlier in this book, a student who is poor or from a minority family is still many times more likely to be classified as retarded than is a child from other sectors of society. The interactions of these many programs are important.

Can we move on from the categorical stage to a more interactive stage?

In almost all the narrowly framed categorical programs there has been a turn to regular classroom teachers and the "mainstream" for help. The resulting "pull-out" programs, in which children spend some time with specialists and some with regular teachers, have a number of disquieting effects. They lead to:

- Discontinuities in school programs for almost all teachers and children when pupils travel in odd patterns throughout the school day from regular classes to Title I classrooms, speech therapy, learning disability resource rooms, and so on.
- A narrowing of leadership and loss of control in total programs at the local school level as increasing numbers of special programs come under the "ownership" of Title I supervisors, the bilingual community, the special education director, or others.
- Increasing use of school staff to make eligibility or entitlement decisions. In many places, for example, school psychologists have been withdrawn from practicing the broader application of their profession and are required to concentrate on simple psychometric gatekeeping, with severe losses in morale and program development potentialities.

- The buildup of political constituencies that tend to protect narrow but hard-won territories (e.g., "learning disabilities") and to oppose broader systems approaches to school improvements.
- Sometimes allowing the provision of services in a special program to justify continuation of a nonadapted curriculum in the regular classroom. The result is a totally inappropriate program.

Special programs are sometimes misused to support continuation of nonadaptive regular school programs.

More Process Than Is Due

One important effect of the federal role in education has been to increase greatly the procedural requirements placed upon teachers and school administrators. IEP's have had to be prepared; Title I pupil appraisal systems have had to be applied; formal notices to and meetings with parents have been required; and so on. When mere procedures consume too much time, attention and resources are subtracted from the education of children, which the services were intended to improve. Several other problems ensue.

Procedural preoccupations distract and divide.

First, procedural rather than substantive norms are used to monitor an increasingly disjointed school system. In some systems, monitoring has included not only state and federal education authorities but also court appointed "masters" who are assigned to shore up some of the categorical boundaries and to insist on timely compliance with various regulations. Second, a litigious attitude in procedures sometimes heightens distrust among teachers, parents, and administrators when more trust is needed.

Finally, by being caught in a complex web of procedures designed to protect the rights of individual children, teachers sometimes have been denied participation in the "moral victory" represented by Public Law 94–142. Daniel Lortie, at a 1977 conference in Minneapolis on The Futures of Education, put it something like this: "Teachers feel that they are left at the far tail-end of a long chain of moral insight." Teachers, among other educational personnel, tend to resent the implication that a sense of moral justice is found only in Washington, D.C., as well as the fact that the impact of Washington's decisions upon them is mainly procedural.

A Strategy for Seeking Solutions

In recent years great "definitional" power came to rest in the U.S. Department of Education. Federal regulations had enormous influence in defining the categories of exceptionality, determining entitlement procedures, and setting many other program standards. States added details, but, in the main, conformity to federal guidelines has been high. If the definitions are problematic, it is now assumed that federal officers have responsibility for making changes.

A definitional crisis is at hand.

We believe a crisis is at hand in these definitional affairs. Because programs in the various extended categories are highly interactive (even though regu-

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The Valley Public Schools, in a suburb of Omaha, Nebraska, began constructing IEP's for its nonhandicapped, as well as handicapped, students three years ago. Students, parents, and teachers cooperatively identified each student's strengths and weaknesses, hobbies, recreational experiences, and career goals. They then designed educational activities for each student, such as field trips or outside reading. Teachers received training in how to identify student characteristics, write performance objectives, and develop IEP's. The state has declared it a demonstration center and provided funds to help other schools follow Valley's example. (Adapted from Northeast Ohio Special Education Regional Resource Center, 1980)

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lations are written as if they were not), changes in one category may have broad effects. The crisis is not uniquely federal. It is a general one with respect to how school boards, administrators, faculty, and parents decide to organize to meet the challenge of individual differences and needs.

New approaches are needed.

We believe the time is fully ripe for the practitioners of special education to undertake a systematic search for better answers to the problems we have described here. We have in mind broad-scale developmental projects that start with the structure of school programs for "special" pupils. In this case, special education administrators at state and federal levels might offer opportunities to local school districts to present plans for new ways of addressing the problems of "marginal" students. As part of the plan, applicants might specify how they intend to work with pupils, evaluate outcomes of instruction, and meet national, state or provincial, and local governmental intent. Instead of launching a new set of "definitions" and requirements or totally devolving present federal responsibilities to state and local levels, leaders in high offices would recognize that no one really knows the answers to the difficult problems we face and that, while protecting basic rights and most presently operating programs, carefully evaluated new approaches to education for students in the extended categories are needed.

Plans must address individualized programming for all children.

In operationalizing this strategy for the future, we believe first that the present structure of federal programs for the exceptional generally could be held in place, at least for a time. It would be an unconscionable disservice to exceptional children and their families to disassemble totally the structure and operations of those federal programs which were only partway in place in the early 1980's, and to require a total restructuring. Second, we believe that the U.S. Department of Education should work out ways of providing funds that will permit crossing various categories to support more and more selected development/demonstration programs. Third, we believe this strategy would work only if programs included mainstream as well as the broad set of "special" programs. In other words, plans should address the problems of individualizing school programs for *all* children. Fourth, as long as certain basic commitments are made, it would be necessary to waive some particulars of rules and regulations at federal and state or provincial and local levels so that responsible experimentation and evaluation could take place.

If those moves are undertaken in the 1980's, there is a chance for the decent restructuring of programs by processes that depend mainly on solid data rather than raw political controls. However, from a political perspective, we believe that the gradual devolvement of federal responsibilities to state and local agencies in special education would be acceptable if it were carried out in a fashion that honors our basic social commitments to exceptional persons and their families and if serious innovation and evaluation were a recognized program component. The following section outlines some of the criteria that need to be considered in framing new approaches to the special education task of the 1980's.

Requirements for Innovative Programs

Some of the essential requirements that proposed innovative programs should meet are as follows:

Instructional effectiveness is paramount.

1. *Instructional effectiveness.* Proposals for educational innovation must, above all, hold promise to enable children to learn efficiently and well, particularly in the basic skill subjects. Parents of "marginal" children have been misled by too many panaceas; now they want evidence that proposed programs will work. Consider the following incident:

   Scene: A meeting of the City Advisory Committee on Special Education Programs.

   An educator addresses the group: Suppose we established in every school building a system whereby *all children* were observed very carefully. When a particular child was noted to be not responding or learning well, resources would be drawn in to study that child very carefully and to arrange alternative and possibly more intensive forms of instruction, at least for a while. Parents would be kept informed and involved, to the full extent that they wanted to be involved. Notice that we're not labeling any child, but careful note would be made of the progress of every child and help given when it is needed.

   The educator then turns to Mrs. Anthony, an active leader in the local Association for Children with Learning Disabilities and the mother of a child classified as learning disabled: Mrs. Anthony, please note that we wouldn't be classifying children as "learning disabled" any more. Would that be acceptable? Remember that we would be working intensively with any child who fell behind.

   Mrs. Anthony: Yes, that's what we'd like best of all.

   Educator addresses two Black women, Mrs. Jones and Mrs. Smith, who are members of the advisory committee and mothers of children in the local schools: It might be found in operating the new system that more Black children showed poor progress in early schooling than other children. Thus, more Black children might be studied intensively and given extra help. Remember, we're not going to label the children as "EMR" or "LD" or any other way, but we're going to be very straightforward about their needs and arrangements for extra help. Would that be okay?

Mrs. Smith (after some delay and quiet discussion with Mrs. Jones): Yes. That would be okay, except that we would want a very strong evaluation of the program to be sure that it's really working.

Rights to education must continue to be protected.

2. *Continued guarantee of basic educational rights for all children.* The hard-won victories for handicapped children in the decade of the 1970's should not be lost, whether or not Public Law 94–142 survives or funds are "blocked." It seems likely that any proposal for change will suffer impossible political difficulties unless, at a minimum, it involves a full commitment to the following principles:
   a. Every child, no matter how special his or her needs may be, shall be provided a free public education.
   b. The education provided to each child shall be appropriate to individual readiness and needs.
   c. Teachers and other school professionals will cooperate fully with parents in planning written educational programs for individual children whose needs are unusual or whose progress in school is of concern.
   d. Parents (including surrogates when appropriate and students themselves as they mature) will be afforded *due process* in connection with all major plans for education, including the right to appeal against educational authorities any decision which they consider to be in violation of the child's best interest.
   e. School programs should be conducted in accordance with the principle of the "least restrictive alternative" as it has been interpreted in recent years.

Adaptive instruction responds to individual needs at the "level of the lesson."

3. *Adaptive instruction for all students.* All students are entitled to individualized education programs, and adaptive or appropriate instruction should be provided to all students, not just those who are exceptional. Within such a context, school personnel must have the capacity to spend more time on both diagnostics and instruction with certain students, a situation in which special education teachers can be employed effectively. Nevertheless, the same basic commitment would be made to all students. Adaptive instruction refers mainly to the differentiation of curriculum to meet individual needs at the "level of the lesson," not at the level of presumed predispositional states or on the basis of individual student profiles on cognitive style, preferred incentives, or the like. Each student's mathematics lesson, for example, should be arranged at an appropriate level, taking into account the scope and sequence of the curriculum and the individual's current level of mastery.

4. *Management assistance and support for regular teachers.* Management demands upon regular teachers should be eased. Through better training, teachers can acquire the skills needed for new forms of consultation and

assistance; pupils can be taught self-managment procedures; modern information systems and technology can be made available; and procedural requirements for the use of special resources can be reduced. Special educators and aides who now work mainly in special centers can be moved into regular class settings for much of their work, and can help with some of the management responsibilities.

Regular teachers must receive stronger supports.

5. *Support for early education and preventive instruction.* Evidence indicates the advantages of earlier schooling for some children and their families, especially children who are disadvantaged by physical or intellectual handicaps or the lack of intellectual stimulation. Early education will require changes in funding systems to reward the *outcomes* of school operations (e.g., fewer disabled learners) rather than the enrollment of learners who are the casualties of school operations.
6. *Cost effectiveness.* Any solution must be cost effective and should show savings over programs now in effect.

Early education is one avenue to cost effectiveness.

7. *Differentiated educational staffing patterns* to permit productive educators to have greater influence and to receive greater rewards. This possibility requires systems-oriented efforts to establish more serviceable links between research developers and teaching practitioners; better monitoring systems to improve relations between supervisors and direct service personnel; more recognition and use of some teachers as instructional leaders; and increased use of paraprofessional personnel.

Attention to staffing patterns can benefit both teachers and children.

A Sample Proposal for the Future

The propitious moment may have arrived in the 1980's for a major change in the structure of schools to resolve some of the problems and issues described. One approach to a new structure follows. It consists of four major elements.

1. Establish a set of experimental school districts in which regulations and rules (both federal and state) can be waived for a period of 5 years for all categorical education programs that have special entitlements for "marginal" pupils (i.e., handicapped, disadvantaged, migrant, Indian, bilingual, etc.). The waivers would be required in order to enable the use of personnel across categories; for example, Title 1 and LD teachers could work together. Categorical funds would need to be provided, but used in a more open cross-categorical way. Changes in reporting and accountability procedures would need to be negotiated.

Creative experimentation deserves active encouragement.

2. Install, in the experimental schools, a broad systems approach to instruction such as the ALEM model, that will provide effective individualized instruction for both exceptional and nonexceptional children in mainstream school settings (Wang, 1980). Features of the system should include (a) the assignment to regular teachers of primary responsibility for adapt-

ing learning environments to individual students' needs; (b) the incorporation of provisions for technical support by special education personnel and aides; and (c) the requirement that students' individual differences be described in terms that are directly relevant to instruction and that instruction be adapted to students' learning needs, thereby eliminating the need for categorical labeling systems.

One systems approach which provides a step in the right direction is the Adaptive Learning Environments Model (ALEM), which was developed at the Learning Research and Development Center, University of Pittsburgh. It has had the advantage of scholarly contributions from many specialists, and has been tested with exceptional and nonexceptional students in "mainstreaming" programs. Among its features are the following:

A broad systems approach to instruction offers evidence of success.

- Individualized programs in basic skill areas for each pupil.
- Curriculum components that instruct children in self-management procedures.
- A computer-based classroom information system for use by pupils, teachers, and supervisors to manage information on instructional plans and monitoring student progress.
- A systematic and broadly based approach to establishing and maintaining parent involvement.
- A data-based staff development program that uses student learning progress and analysis by school principals and instructional staff to identify needs for consultation, staff development, or other renewal activities.
- A system for the early and continuous projection of learning rates and the identification of pupils who may have special needs.

Preliminary studies of ALEM have shown a number of significant effects (Wang, 1981). "On-task" rates by pupils are high in comparison with the rates generally achieved in classrooms. The interactions of pupils and teachers tend to be predominantly for instructional rather than management purposes. Students show achievement advantages over peers who are enrolled in alternative programs, and gains tend to be retained over several years (the full period of observation, so far). Handicapped students in ALEM classes tend to rate their own cognitive competence and general self-esteem higher than handicapped students in non-ALEM classes. Handicapped students enrolled in ALEM show higher achievements in the basic skills of reading and arithmetic than comparable students enrolled in control classes. Finally, gifted students in ALEM classes show more accelerated rates of achievement in reading and mathematics as compared with gifted students in non-ALEM classes.

Experimentation can provide a source of data for new funding systems.

3. Work toward the design of new cross-categorical funding and accountability systems based on data from the experimental sites. The result would be funding systems in which the dollar flow is triggered by stable programmatic or personnel elements of cost and accountability. Decisions would be made on the basis of statistical evidence of the outcomes of instruction rather than on how many labeled children are fed into the system, which is the basis for present funding systems.

4. Work for the definition of new roles for personnel who are currently assigned to special instructional situations. The operation of ALEM, for example, quickly cuts across territories that are now "owned" by Title I teachers, learning disability teachers, EMR teachers, speech-language pathologists, or other specialists. The roles of such personnel, when they work in a broad systems context, are not less important than before, but they are different. It is proposed here that the roles of specialists be revised in the context of systems approaches to individualized instruction for all students.

The role of specialists must be redifined.

Figure 14-1 suggests the directions that role revisions need to take regarding mildly and moderately handicapped children. At the first-order level ("street level") are the regular school staff members who engage children and their parents directly in regular classes.

The second-order level consists of special educators and paraprofessionals at the building level. Envisioned here is a totally coordinated second-order system that encompasses all the special education conducted in a particular school building plus whatever endeavors are extended to disadvantaged, bilingual, migrant, low-English proficiency, or other children with special needs. Regular teachers would turn to this source of help within their school to deal with *all* children who reside in a school's attendance area and who have special needs. Together, teachers and other building staff members would operate a carefully developed system for the individualization of instruction for *all* pupils. Included within the system would be the capacity for intensive work with children who have special needs, but these children would not be given traditional labels. A school with 25 to 30 regular teachers would have a second-order staff of 3 to 5 special education teachers and 4 to 6 paraprofessionals.

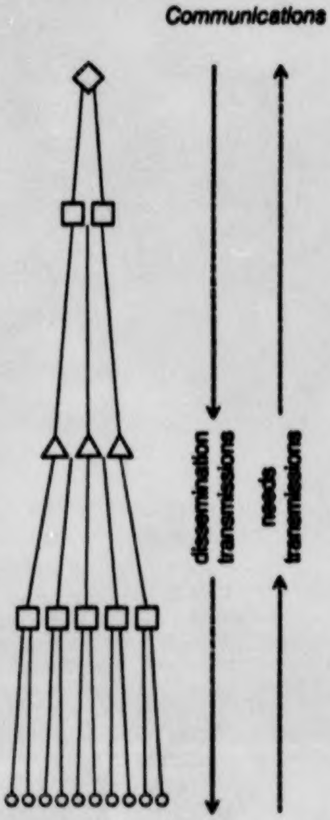
The proposed model addresses educational needs of all exceptional children.

As more and more of the direct instruction of exceptional students is managed by regular teachers and generic special educators (levels 1 and 2), the demand for consultation and training help from specialists is increased. This provision is represented by the third-order level in Figure 14-1. A local school might be able to serve some children with complex educational needs very effectively through a combination of the regular teacher and the resources of a special educator, working together. These two teachers may need additional help, however, in managing the system for individualizing instruction, carrying out special assessments, selecting and supplying special materials, and consulting with parents. Thus, they would call upon a consultant from the school district general offices. First-order and second-order staff members can enlarge their areas of expertise through consultation with computer experts, educational audiologists, psychological experts on behavior management, experts on learning problems, parent educators, or other specialists.

The fourth-order level consists of college and university professionals who prepare personnel for all levels. At the fifth level are research and development (R&D) personnel who are often but not always employed in universities. They lead efforts to understand and improve special education practices.

FIGURE 14-1
A Special Education Structure for the Future

5th order level	Research and development
4th order level	College and university programs for the preparation of personnel at all levels
3rd order level	Specialized consultant/training staff who serve in a total school district or region (psychologists, parent education consultants, behavior analysts, teachers of braille, consultants on learning problems, etc.). They "back up" 2nd order building-based special education staff.
2nd order level	Generic special educators and paraprofessionals who work full-time at the building level in a unified, cross-categorical, multiple program structure operated in collaboration with regular teachers
1st order level	Regular teachers who are prepared for "mainstreaming"



Adapted from Birch & Reynolds, 1982.

Desirable communication links across all levels are indicated on the right of Figure 14-1. Strong two-way communication is needed: (a) *outward* from the first-order level to keep everyone informed about the needs and realities of the teaching/learning situation (the *needs transmissions*); and (b) *inward* from R&D personnel to all other levels to keep staff members informed of important developments in the knowledge base related to instruction (the *dissemination transmissions*).

In a sense, this conception turns the structure for special education and other programs for "marginal pupils" on its head. In the past, narrow categorical specialists were employed at the street level in the schools. Now we think it is appropriate to move toward the greater involvement of regular teachers and a broadly prepared group of generic special educators at the school-based levels and to back them up with specialists. It has become unrealistic and defeating to imagine that we can employ highly specialized categorical specialists at the street level. (Note that the specializations at the third-order and higher levels are not necessarily categorical in the traditional special education sense.)

Narrow specialization is no longer an effective approach.

The structure proposed in Figure 14-1 for the future of education for marginal students requires radical changes in the training, deployment, and certification of school personnel. It acknowledges the move toward the unification of regular education and all forms of "special" education, as well as the assumption of leadership by broadly prepared regular-line administrative officers in the school system. It calls for the deployment of a backup cadré of specialists who can support building-level programs through consultation and training. Such specialists also should be able to make contributions to preparation programs conducted by colleges and universities and to the research programs conducted in special centers.

In the context of the far-reaching changes proposed here, teaching could be accelerated to achieve professional status (Corrigan & Howey, 1980). More differentiation in the roles of educators is also provided.

The effectuation of a systems model for individualizing instruction, plus a reworking of the roles of specialists to bring them into a unified school operation designed to meet individual needs, would entail many changes in present programs. We have briefly presented one proposal as an example of the basic structural change which we believe will be required to deliver on the intents of Public Law 94–142. Note that our proposal is not radically different from the operations of a modern special education program in an elementary school described in the first few pages of this book.

Modern programs serve as working models.

Conclusion

The federal government's involvement in public education over the past two decades has taken us down an unpromising road toward many narrowly framed programs to meet the needs of various categories of poorly served students. The needs have been very great and the moral commitments beyond reproach; but the professional quality of the response has been equivocal and the procedural load heavy. The attention of many educators has turned to procedural rather than substantive norms.

These disjointed developments have been a terrible burden, and they seem to be based largely on doubtful assumptions and procedures. Many teachers are rightfully complaining and asking for help.

The time for basic restructuring has arrived.

The time may be at hand for a basic restructuring of the schools. A key to that restructuring may be to use the various "special" funds for a period of time as "developmental capital" to rework the total school system and increase its capacity to address individual differences. If we draw upon the best ideas now available, divest ourselves of some of the errors of the past, and commit ourselves and our resources to the task ahead, we can enter an era of revitalizing improvements. The problems of educating exceptional children will not be solved unless and until some of the other basic problems of schooling are addressed.

In the last several decades the rights of children to receive education, and, furthermore, education that is appropriate to their needs, have been well established. We need argue no longer about those basic matters. Attention must now be directed to the problems of providing good quality education to all.

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